



# **Permit / Application Information Sheet** **Division of Environmental Protection** **West Virginia Office of Air Quality**

<b>Company:</b>	CUMMINS CROSSPOINT, LLC		<b>Facility:</b>	Cross Lanes
<b>Region:</b>	4	<b>Plant ID:</b>	039-00671	<b>Application #:</b> 13-3323
<b>Engineer:</b>	Kessler, Joe		<b>Category:</b>	
<b>Physical Address:</b>	602 New Goff Mountain Rd Cross Lanes WV 25313		<b>SIC:</b> [5013] WHOLESALE TRADE-DURABLE GOODS - AUTOMOTIVE PARTS AND SUPPLIES <b>NAICS:</b> [441310] Automotive Parts and Accessories Stores	
<b>County:</b>	Kanawha			
<b>Other Parties:</b>	ENV_MGR - Peaper, John 317-240-1965			

**Information Needed for Database and AIRS**  
 1. Need valid physical West Virginia address with zip

**Regulated Pollutants**

CO	Carbon Monoxide	20.630 TPY
PM10	Particulate Matter < 10 um	8.270 TPY
SO2	Sulfur Dioxide	6.320 TPY
VOC	Volatile Organic Compounds (Reactive organic gases)	30.760 TPY
PM2.5	Particulate Matter < 2.5 um	8.270 TPY
PT	Total Particulate Matter	8.270 TPY
VHAP	VOLATILE ORGANIC HAZARDOUS AIR POLLUTANT	14.380 TPY
NOX	Nitrogen Oxides (including NO, NO2, NO3, N2O3, N2O4, and N2O5)	95.880 TPY

**Summary from this Permit 13-3323**

Air Programs		Applicable Regulations
MACT		
SIP		
AFTER FACT		
Synthetic Minor		
Synthetic Minor for Title V		
Fee Program	Fee	Application Type
9E	\$3,500.00	CONSTRUCTION

**Notes from Database**

Permit Note: After-the-Fact application for their engine repair and rehabilitation shop in Corss Lanes. Emergency Generator is in the donut hole, not subject to JJJJ. New engine under ZZZZ.

**NOTICE**

Activity Dates	
APPLICATION RECIEVED	05/25/2016
APPLICATION FEE PAID	05/27/2016 2500
ASSIGNED DATE	05/27/2016
APPLICANT PUBLISHED LEGAL AD	05/27/2016
APPLICATION FEE PAID	06/06/2016 1000
APPLICATION INCOMPLETE	06/15/2016
APPLICATION DEEMED COMPLETE	08/16/2016

**NON-CONFIDENTIAL**

Please note, this information sheet is not a substitute for file research and is limited to data entered into the AIRTRAX database.

Company ID: 039-00671  
 Company: CUMMINS CROSSPOINT, LLC  
 Printed: 09/27/2016  
 Engineer: Kessler, Joe

## IPR FILE INDEX

**Applicant :** Cummins Crosspoint, LLC  
**Facility :** Cross Lanes

**Plant ID No.:** 039-00671  
**Permit No.:** R13-3323

### Chronological Order - Add Index Pages As Necessary

Date	To	From	Subject	# of pages
5/27/16	Cummins	Sandra Adkins	48-Hour Letter	
6/15/16	Cummins	Joe Kessler	Incompleteness E-mail	
6/23/16	Joe Kessler	Cummins	Response to Incompleteness Letter including Affidavit of Publication	
7/29/16	Joe Kessler	Cummins	Revised Application Permit Pages	
8/16/16	Cummins	Joe Kessler	Completeness Determination	
10/20/16	Various	Various	Cummins/DAQ E-mails	
10/20/16	File	Joe Kessler	Draft Permit R13-3323, Evaluation/Fact Sheet, Tracking Manifest	
10/20/16	Various	Sandra Adkins	Public Notice Documents	

JRK  
10/20/16

# AIR QUALITY PERMIT NOTICE

## Notice of Intent to Approve

On May 25, 2016, Cummins Crosspoint, LLC applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for an after-the-fact permit to construct the Cross Lanes engine repair and rebuild shop located at 602 New Goff Mountain Road in Kanawha County, WV at latitude 38.39663 and longitude -81.78790. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the existing facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-3323.

The following potential emissions will be authorized by this permit action: Particulate Matter less than 2.5 microns, 8.27 tons per year (TPY); Particulate Matter less than 10 microns, 8.27 TPY; Particulate Matter, 8.27 TPY; Sulfur Dioxide, 6.32 TPY; Oxides of Nitrogen, 95.88 TPY; Carbon Monoxide, 20.63 TPY; Volatile Organic Compounds, 30.76 TPY; Hazardous Air Pollutants (HAPs), 14.38 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on **XXXXXX**. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the after-the-fact construction will meet all State and Federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Joe Kessler, PE  
WV Department of Environmental Protection  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304  
Telephone: 304/926-0499, ext. 1219  
FAX: 304/926-0478

*Entire Document*  
**NON-CONFIDENTIAL**

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

<http://www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx>

## Kessler, Joseph R

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**From:** Adkins, Sandra K  
**Sent:** Friday, October 21, 2016 2:07 PM  
**To:** Vanessa Adams  
**Cc:** Kessler, Joseph R  
**Subject:** RE: Publication of Class I Legal Ad for the WV Division of Air Quality

Thank you!

---

**From:** Vanessa Adams [mailto:legals@cnpapers.com]  
**Sent:** Friday, October 21, 2016 2:06 PM  
**To:** Adkins, Sandra K <Sandra.K.Adkins@wv.gov>  
**Subject:** Re: Publication of Class I Legal Ad for the WV Division of Air Quality

Please see below the proof for Ad #643028 set to run 10/26. The cost is \$84.18.

Thank you,  
Vanessa

### PROOF:

AIR QUALITY  
PERMIT NOTICE

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Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on Monday, November 28, 2016. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

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<http://www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx>  
(643028)

On 10/20/2016 9:39 AM, Adkins, Sandra K wrote:

Please publish the information below as a Class I legal advertisement (one time only) in the Wednesday, October 26, 2016, issue of *The Charleston Gazette-Mail*. Please let me know that this has been received and will be published as requested. Thank you.

Send the invoice for payment and affidavit of publication to:

**Sandra Adkins**

**WV Department of Environmental Protection  
DIVISION OF AIR QUALITY**

**601- 57th Street**

**Charleston, WV 25304**

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--  
Have a Great Day!

Vanessa Adams  
Legal Clerk  
1001 Virginia Street East  
Charleston, WV 25301  
304-348-4844 Office  
304-348-5133 Fax

## Kessler, Joseph R

---

**From:** Adkins, Sandra K  
**Sent:** Friday, October 21, 2016 1:42 PM  
**To:** 'wentworth.paul@epa.gov'; 'bradley.megan@epa.gov'; john.w.peaper@cummins.com  
**Cc:** Durham, William F; McKeone, Beverly D; McCumbers, Carrie; Hammonds, Stephanie E; Kessler, Joseph R; Taylor, Danielle R; Rice, Jennifer L; Shrewsbury, Todd H; Rowe, Michael T  
**Subject:** WV Draft Permit R13-3323 for Cummins Crosspoint, LLC; Cross Lanes  
**Attachments:** 3323.pdf; Eval3323.pdf; AttachmentA.pdf; notice.pdf

Please find attached the Draft Permit R13-3323, Engineering Evaluation, Attachment A, and Public Notice for Cummins Crosspoint, LLC's Cross Lanes facility located in Kanawha County.

The notice will be published in *The Charleston Gazette-Mail* on Wednesday, October 26, 2016, and the thirty day comment period will end on Monday, November 28, 2016.

Should you have any questions or comments, please contact the permit writer, Joe Kessler, at 304 926-0499 x1219.

## Kessler, Joseph R

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**From:** Adkins, Sandra K  
**Sent:** Friday, October 21, 2016 1:41 PM  
**To:** Glance, Jacob P; Gillenwater, Kelley J  
**Cc:** Kessler, Joseph R  
**Subject:** DAQ Public Notice

Please see below the Public Notice for Draft Permit R13-3323 for Cummins Crosspoint, LLC's Cross Lanes facility located in Kanawha County.

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# Permit to Construct

*Entire Document*  
**NON-CONFIDENTIAL**



**R13-3323**

*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

Issued to:  
**Cummins Crosspoint, LLC**  
**Cross Lanes**  
**039-00671**

**DRAFT**

---

*William F. Durham*  
*Director*

Issued: **DRAFT**

*This permit will supercede and replace Consent Order CO-R13-E-2016-13.*

Facility Location: 602 New Goff Mountain Rd., Cross Lanes, Kanawha County, West Virginia  
Mailing Address: 602 New Goff Mountain Rd., Cross Lanes, WV 25313  
Facility Description: Engine Repair and Rebuild Shop  
SIC/NAICS Code: 5013/441310  
UTM Coordinates: 431.207 km Easting • 4,250.102 km Northing • Zone 17  
Latitude/Longitude: 38.39663/-81.78790  
Permit Type: After-the-Fact Construction  
Description: After-the-fact construction of an engine repair and rebuild shop Consent Order (CO-R13-E-2016-13).

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.*

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*The source is not subject to 45CSR30.*

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## 1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1S	1E, 2E	Engine Dynamometer	2009	2,500 hp	None
2S	3E	Chassis Dynamometer	2009	600 hp	None
3S	4E	Paint Booth	2009	1.5 gal/hr	1C
4S	5E <sup>(1)</sup>	Filter Cleaner	2009	n/a	2C
5S	5E <sup>(1)</sup>	<b>Parts Washing</b>	2009	n/a	None
		Repair Shop Crystal Cleans Parts Washer #1			
		Repair Shop Crystal Cleans Parts Washer #2			
		MRC Rotary Parts Washer #1			
		MRC Rotary Parts Washer #2			
		MRC Parts Washer #1			
		MRC Parts Washer #2			
		MRC Parts Washer #3			
		MRC Parts Washer #4			
6S	7E	Ford ESG-642 Emergency Generator Set (Cummins Model GGFE-5938919) <i>Manufactured Date: 11/26/07</i>	(May) 2011	67 hp	None
7S	Fugitive	Cooling Tower	2009	154 gpm	None

(1) These units vent inside the shop building and then are evacuated outside through general exhaust fans.

## 2.0. General Conditions

### 2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NSPS</b>	New Source Performance Standards
<b>CBI</b>	Confidential Business Information	<b>PM</b>	Particulate Matter
<b>CEM</b>	Continuous Emission Monitor	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5µm in diameter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>Ppb</b>	Pounds per Batch
<b>CO</b>	Carbon Monoxide	<b>pph</b>	Pounds per Hour
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>ppm</b>	Parts per Million
<b>DAQ</b>	Division of Air Quality	<b>Ppmv or ppmv</b>	Parts per million by volume
<b>DEP</b>	Department of Environmental Protection	<b>PSD</b>	Prevention of Significant Deterioration
<b>dscm</b>	Dry Standard Cubic Meter	<b>psi</b>	Pounds per Square Inch
<b>FOIA</b>	Freedom of Information Act	<b>SIC</b>	Standard Industrial Classification
<b>HAP</b>	Hazardous Air Pollutant	<b>SIP</b>	State Implementation Plan
<b>HON</b>	Hazardous Organic NESHAP	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>HP</b>	Horsepower	<b>TAP</b>	Toxic Air Pollutant
<b>lbs/hr</b>	Pounds per Hour	<b>TPY</b>	Tons per Year
<b>LDAR</b>	Leak Detection and Repair	<b>TRS</b>	Total Reduced Sulfur
<b>M</b>	Thousand	<b>TSP</b>	Total Suspended Particulate
<b>MACT</b>	Maximum Achievable Control Technology	<b>USEPA</b>	United States Environmental Protection Agency
<b>MDHI</b>	Maximum Design Heat Input	<b>UTM</b>	Universal Transverse Mercator
<b>MM</b>	Million	<b>VEE</b>	Visual Emissions Evaluation
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>VOL</b>	Volatile Organic Liquids
<b>NA</b>	Not Applicable		
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		
<b>NO<sub>x</sub></b>	Nitrogen Oxides		

### **2.3. Authority**

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation.*

### **2.4. Term and Renewal**

- 2.4.1. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

### **2.5. Duty to Comply**

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3223 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
[45CSR§§13-5.11 and 13-10.3]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### **2.6. Duty to Provide Information**

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

### **2.7. Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

## **2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4]

## **2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

## **2.10. Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

## **2.11. Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

## **2.12. Emergency**

2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.

- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and,
  - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

### **2.13. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

### **2.14. Suspension of Activities**

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

### **2.15. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege.

### **2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

### **2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1]

## **2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

## **2.19. Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.  
[45CSR§11-5.2.]

#### 3.2. Monitoring Requirements

- 3.2.1. **Emission Limit Averaging Time.** Unless otherwise specified, compliance with all annual limits shall be based on a rolling twelve month total. A rolling twelve month total shall be the sum of the measured parameter of the previous twelve calendar months. Compliance with all hourly emission limits shall be based on the applicable NAAQS averaging times or, where applicable, as given in any approved performance test method.

#### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the

permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
  1. The permit or rule evaluated, with the citation number and language;
  2. The result of the test for each permit or rule condition; and,
  3. A statement of compliance or noncompliance with each permit or rule condition.

**[WV Code § 22-5-4(a)(14-15) and 45CSR13]**

### 3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.
- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.  
*[45CSR§4. State-Enforceable only.]*

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304-2345

**If to the USEPA:**

Associate Director  
Office of Air Enforcement and Compliance Assistance  
(3AP20)  
U. S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

3.5.4. **Operating Fee.**

- 3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall

be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

- 3.5.4.2. In accordance with 45CSR22 – Air Quality Management Fee Program, enclosed with this permit is an Application for Certificate to Operate (CTO). The CTO will cover the time period beginning with the date of initial startup through the following June 30. Said application and the appropriate fee shall be submitted to this office prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with Section 4.5 of 45CSR22. A copy of this schedule may be found on the reverse side of the CTO application.
- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

#### 4.0. Source-Specific Requirements

##### 4.1. Limitations and Standards

- 4.1.1. Only those emission units as identified in Table 1.0, with the exception of any *de minimis* sources as identified under Table 45-13B of 45CSR13, are authorized at the permitted facility. In accordance with the information filed in Permit Applications R13-3323, the emission units identified under Table 1.0 of this permit shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants, and shall not exceed the listed maximum design capacities.

4.1.2. **Engine Dynamometers (1S)**

Use of the engine dynamometers (1S) shall be in accordance with the following:

- a. Aggregate emissions from the engine dynamometers, as emitted from emission points 1E and 2E, shall not exceed the following limits:

**Table 4.1.2(a): Dynamometers Emission Limits<sup>(1)(2)</sup>**

Pollutant	lb/hr	tpy
NO <sub>x</sub>	77.50	54.66
CO	16.70	11.77
PM <sub>2.5</sub> /PM <sub>10</sub> /PM	8.07	4.65
SO <sub>2</sub>	5.13	3.59
VOC	6.29	4.46

- (1) The engine dynamometer is a passive device, it is not directly an emissions-generating unit (the engine(s) coupled to it produce the emissions). However, as various engines are tested in the dynamometer while it remains in place, the dynamometer has been designated the emissions unit in this case.
- (2) The emission limits under Table 4.1.2(a) are in effect for all type engines tested in 1S and 2S and represent aggregate and not per-engine limits if more than one engine is tested at a time.
- b. Engines tested in the dynamometers shall not exceed an aggregate of 2,500 horsepower (hp) and shall only be fired by Number 2 Fuel Oil; and
- c. The maximum aggregate amount of diesel combusted while testing takes place in the engine dynamometers shall not exceed 190,000 gallons/year.

4.1.3. **Chassis Dynamometer (2S)**

Use of the chassis dynamometer (2S) shall be in accordance with the following:

- a. Emissions from the chassis dynamometer, as emitted from emission point 3E, shall not exceed the following limits:

**Table 4.1.3(a): Chassis Dynamometer Emission Limits<sup>(1)</sup>**

Pollutant	lb/hr	tpy
NO <sub>x</sub>	18.60	40.73
CO	4.01	8.78
PM <sub>2.5</sub> /PM <sub>10</sub> /PM	1.32	2.89

Pollutant	lb/hr	tpy
SO <sub>2</sub>	1.23	2.69
VOC	1.51	3.30

(1) The chassis dynamometer is a passive device, it is not directly an emissions-generating unit (the vehicles tested on it produce the emissions). However, as various vehicles are tested in the dynamometer while it remains in place, the dynamometer has been designated the emissions unit in this case.

- b. Vehicles tested in the chassis dynamometer shall only utilize diesel-fired engines not to exceed 600 hp; and
- c. The maximum hours of operation of the chassis dynamometer shall not exceed 4,380 hours/year.

#### 4.1.4. Paint Booth (3S)

Application of surface coatings in the paint booth (3S) shall be in accordance with the following:

- a. Aggregate emissions from surface coating operations in the paint booth, as emitted from emission point 4E and as fugitive emissions, shall not exceed the following limits:

**Table 4.1.4(a): Emission Limits**

Pollutant	pounds/hour <sup>(1)</sup>	tons/year
Volatile Organic Compounds (VOCs)	5.21	22.81
Particulate Matter	0.06	0.24
Hazardous Air Pollutants (HAPs) <sup>(2)</sup>	3.23	14.13
<i>Xylene</i>	1.66	7.25
<i>Methyl Isobutyl Ketone</i>	1.27	5.58
<i>Ethyl Benzene</i>	0.30	1.30

- (1) All pound/hour limits are as averaged over one calendar month of operations.
- (2) HAPs are those chemical compounds listed under Section 112(b) of the Clean Air Act Amendments of 1990 and any amendments or revisions thereto. This limit is for the emission of all aggregated HAPs.
- b. Sprayguns shall be installed, maintained, and utilized so as to achieve an average transfer efficiency of 60% in the application of any coatings within the spray booths;
- c. The paint booth shall be designed, operated, and maintained with adequate negative pressure so as to capture all of the overspray from the application of the surface coatings and direct the overspray to the fiberglass paint arrestors;
- d. Fiberglass paint arrestors, identified as 1C, shall be installed, maintained, and operated so as to achieve a minimum efficiency of 99.0% in the control of particulate matter emissions from the paint booth. At such times that is necessary to maintain the minimum particulate matter collection efficiency, 1C shall be replaced with new filters; and
- e. At a minimum of bi-annually (no more than six months between checks), visual inspections of the spray guns, paint booths, and mat filters shall be made so as to ensure the achievement of the minimum transfer/capture/control efficiencies required above. The visual inspection shall be conducted so as to find any defect or deterioration in quality of the spray guns, paint booths, and mat filters that would cause or contribute to a reduction of the transfer/capture/control efficiency to below the minimums required in this section. Upon detection of a defect or a deterioration in

quality of any of the equipment, repair or replacement of the affected equipment shall take place prior to any further surface coating operations that utilize said affected equipment. A record of each visual inspection required above shall be maintained on site for a period of no less than three (3) years. The record shall include, but not be limited to, the date, time, listing of equipment checked, the results, what action(s), if any, was/were taken, and the name of the observer.

**4.1.5. Filter Cleaner (4S)**

Use of the Filter Cleaner (4S) shall be in accordance with the following:

- a. Emissions from the filter cleaner, as emitted from emission point 5E, shall not exceed the following limits:

**Table 4.1.3(a): Filter Cleaner Emission Limits**

Pollutant	lb/hr	tpy
PM <sub>2.5</sub> /PM <sub>10</sub> /PM	0.11	0.49

- b. The Filter Cleaner shall include a fabric cartridge filter, identified as 2C, to control particulate matter emissions from the unit. The particulate matter outlet emissions from the Filter Cleaner shall not exceed 0.01 gr/dscf. As based on manufacture's recommendation or at such times that is necessary to maintain the minimum particulate matter collection efficiency, 1C shall be replaced with new filters.

**4.1.6. Parts Washing (5S)**

Parts Washing (5S) shall be in accordance with the following:

- a. Aggregate emissions from parts washing, as emitted from emission point 6E, shall not exceed the following limits:

**Table 4.1.6(a): Parts Washing Emission Limits**

Pollutant	lb/hr	tpy
VOC	0.03	0.14

- b. Lids on the Parts Washers shall remain closed as much as possible, not to exceed a minimum of 90% of the time, to mitigate the evaporative emissions of VOCs in the use of cleaning solvents. The collection and disposal of any dirty or used cleaning solvents shall be done in a manner to minimize any evaporative emissions of VOCs; and
- c. Solvent use in the Parts Washers shall not exceed the VOC-contents of Crystal Clean Premium 142 Mineral Spirits (in Repair Shop Crystal Cleans Parts Washer #1 and #2) and the Chem Station 50366 (remaining parts washers). Other cleaners/solvents may be used that have equivalent or better characteristics with respect to generating VOC emissions.

**4.1.7. Emergency Generator (6S)**

The emergency generator, identified as 6S, shall meet the following requirements:

- a. The unit shall be a 67 hp 4-Stroke Rich Burn (4SRB) Ford Model ESG-642 Emergency Generator Set (Cummins Model GGFE-5938919), shall only be fired by pipeline-quality natural gas or liquified petroleum gas (propane), and shall not operate in excess of 500 hours per year during periods not defined as emergencies;

- b. The maximum emissions from the Emergency Generator (regardless of fuel combusted) shall not exceed the limits given in the following table:

**Table 4.1.7(b): Emergency Generator Emission Limits**

Pollutant	PPH	TPY
CO	1.88	0.47
NO <sub>x</sub>	2.05	0.51
VOC	0.10	0.03

- c. Based on the size of the emergency generator (67 hp) and the date of manufacture (11/26/07), the unit is not subject to 40 CFR 60, Subpart JJJJ; and
- d. **40 CFR 63, Subpart ZZZZ**  
An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.  
[40 CFR §63.6590(c)]

**4.1.8. Cooling Tower**

The cooling tower, identified as 7S, shall not process more than 80,942,200 gallons/year of cooling water.

**4.1.9. 45CSR7 - Manufacturing Processes**

Emission sources 3S, 4S, and 7S shall comply with all applicable limitations and standards under 45CSR7, including the requirements given below under (a) through (d).

- a. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7.  
[45CSR§7-3.1]
- b. The provisions of subsection 3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.  
[45CSR§7-3.2]
- c. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of this rule.  
[45CSR§7-4.1]
- d. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest

fugitive particulate matter emissions reasonably achievable.  
[45CSR§7-5.1]

4.1.10. **45CSR7 - Manufacturing Processes**

The permittee shall comply with all applicable limitations and standards under 45CSR7, including the requirement given below under (a).

- a. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.

[45CSR§7-5.2]

- 4.1.11. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions and according to manufacturer's recommendations, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.11.]

4.2. **Monitoring, Compliance Demonstration, Recording and Reporting Requirements**

4.2.1. **Usage Monitoring (1S, 2S, 6S, 7S)**

For the purposes of demonstrating continuous compliance with the limitations set forth in 4.1.2(c) 4.1.3(c), 4.1.7(a), and 4.1.8, the permittee shall monitor and record the monthly and rolling twelve month usage of the following: (1) diesel combusted in the engine dynamometers, (2) the hours of operation of the chassis dynamometer, (3) the hours of non-emergency operation of the emergency generator, and (4) amount of cooling water processed in the cooling tower.

4.2.2. **Actual Emissions Monitoring (3S)**

For the purposes of determining on-going compliance with the emission limits set forth in 4.1.4(a), the permittee shall monitor and record on a monthly basis the hourly, monthly, and rolling twelve month total emissions of the pollutants specified under 4.1.4(a) according to the following:

- a. The permittee shall maintain records of the following:
  - (1) The name and volume (in gallons) of each material, as applied or used in the paint booth, on a monthly basis; and
  - (2) The mass of VOC, aggregate and speciated HAPs, and solids per volume of each material, as applied or used in the paint booth, on a monthly basis.
- b. The following formulas shall be used to determine the quantities specified in 4.2.2(a) above:
  - (1) The mass of VOCs, aggregate and speciated HAPs, and solids per volume (in pounds per gallon) of each material shall be determined by one of the following methods:
    - (i) Certified Product Data Sheets ("Certified Product Data Sheets" shall have the definition assigned to them under 40 CFR 63, Subpart JJ) or an equivalent provided by the material

supplier;

- (ii) A test conducted, or have conducted, by the permittee to determine the applicable quantities using either Method 24 of 40 CFR 60 or a test method approved in advance by the Director;
  - (iii) MSDS's if the material is used in an aggregate amount less than 100 gallons on an annual basis and for which either of the above two options is not reasonable; or
  - (iv) Another method on a case-by-case basis as approved in advance by the Director.
- (2) The mass of VOCs, aggregate and speciated HAPs, and solids of each material, as applied, on a monthly basis, shall be calculated using the following formula:

$$\text{Mass(pounds of VOCs, HAPs, or Solids/Month)} = A * B$$

Where: A = monthly material usages in gallons per month

B = VOCs, HAPs, or Solids content of the materials used in pounds per gallon as determined under 4.2.2(b)(1).

- (3) The annual, monthly, and hourly emission rates of VOCs and aggregate and speciated HAPs shall be calculated in the following manner:
- (i) The annual emission rate of VOCs and aggregate and speciated HAPs shall be calculated as the sum of the monthly emission rates of VOCs and aggregate and speciated HAPs, respectively, from the previous twelve (12) months.
  - (ii) The monthly emission rate of VOCs and aggregate and speciated HAPs shall be calculated as the mass of VOCs and aggregate and speciated HAPs (as calculated above in 4.2.2(b)(2)), as applied, for the specified month.
  - (iii) The hourly emission rates of VOCs and aggregate and speciated HAPs shall be calculated, on a monthly basis, using the following formula:

$$\text{Emission rate(pounds of VOCs, HAPs/Hour)} = C/D$$

Where: C = Mass (pounds of VOCs, aggregate and speciated HAPs/Month)

D = Monthly hours of surface coating operations

- (4) The annual, monthly, and hourly emission rates of PM shall be calculated in the following manner:
- (i) The annual emission rate of PM shall be calculated as the sum of the monthly emission rate of PM from the previous twelve (12) months.
  - (ii) The monthly emission rate of PM shall be calculated using the following formula:

$$\text{Emission rate(PM/month)} = [C * (1 - (TE/100))] * [1 - ((CapEff/100) * (ConEff/100))]$$

Where: C = Mass(pounds of Solids/Month)

TE = Estimated Minimum Transfer Efficiency of Surface Coating Operations (specified to be 60% under 4.1.4(b))

CapEff = Estimated Minimum Capture Efficiency of Spray Booths (specified to be 100% under 4.1.4(c))  
ConEff = Estimated Minimum Control Efficiency of Mat Filters (specified to be 99.0% (as applicable) under 4.1.4(d))

(iii) The hourly emission rates of PM shall be calculated, on a monthly basis, using the following formula:

$$\text{Emission rate(pounds of PM/Hour)} = C/D$$

Where: C = Mass(pounds of Solids/Month)

D = Monthly hours of surface coating operations

c. The following materials may be excluded from actual emissions reporting under this section:

- (1) those used during non surface-coating or production purposes (e.g., janitorial, maintenance) only; and
- (2) touch-up markers, can-applied laquers, and contact glue, etc. provided that in no calendar year, as calculated under 4.2.2, VOC emissions do not exceed 1 ton per year.

#### 4.3. Performance Testing Requirements

4.3.1. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations or emission control requirements established in this permit and/or applicable regulations.

#### 4.4. Recordkeeping Requirements

4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess

emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.4.4. **45CSR21 Recordkeeping Requirements**

An owner or operator of a miscellaneous metal parts and products coating line that is exempt from the emission limitations in section 19.3 shall comply with the certification, recordkeeping, and reporting requirements in section 4.2.

**[45CSR§21-19.7]**

### CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup>

(please use blue ink)

Responsible Official or Authorized Representative \_\_\_\_\_

Date \_\_\_\_\_

Name and Title

(please print or type)

Name \_\_\_\_\_

Title \_\_\_\_\_

Telephone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

☐ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
  - (I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
  - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.



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**west virginia department of environmental protection**

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Division of Air Quality  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Phone: (304) 926-0475 • Fax: (304) 926-0479

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

## **ENGINEERING EVALUATION / FACT SHEET**

### **BACKGROUND INFORMATION**

Application No.:	R13-3323
Plant ID No.:	039-00671
Applicant:	Cummins Crosspoint, LLC
Facility Name:	Cross Lanes
Location:	Cross Lanes, Kanawha County
SIC/NAICS Code:	5013/441310
Application Type:	Construction
Received Date:	May 25, 2016
Engineer Assigned:	Joe Kessler
Fee Amount:	\$3,500
Date Received:	June 6, 2016
Complete Date:	September 9, 2016
Due Date:	November 14, 2016
Applicant's Ad Date:	May 27, 2016
Newspaper:	<i>Charleston Gazette-Mail</i>
UTM's:	431.207 km Easting • 4,250.102 km Northing • Zone 17
Latitude/Longitude:	38.39663/-81.78790
Description:	After-the-Fact construction of an engine repair and rebuild shop.

*Entire Document*  
**NON-CONFIDENTIAL**

In August of 2015, Cummins Crosspoint, LLC (Cummins) acquired 100% equity ownership of Crosspoint, the owner and operator of the Cross Lanes engine repair and rebuild shop. After an internal environmental audit, Cummins discovered that the Cross Lanes facility required a permit under 45CSR13. On April 1, 2016, Cummins voluntarily disclosed to the Division of Air Quality (DAQ) that the facility did not have a required permit. On August 22, 2016, Cummins entered into a Consent Order (CO-R13-E-2016-13) with the DAQ over this issue.

### **DESCRIPTION OF PROCESS**

Cummins' Cross Lanes facility repairs, rebuilds, and sells large industrial and mobile source engines. The facility includes both an engine and chassis dynamometer, a paint booth, a filter cleaner, and various parts washers to accomplish this.

The engine dynamometer testing station (consisting of two dynamometers only one of which is currently used at a time) is used to test the performance of repaired and rebuilt engines (1S). Currently diesel-fired engines up to 2,500 horsepower (hp) are tested. Engines are hooked to the dynamometer and then run at various loads and speeds to verify the engines are working properly. Cummins has estimated a maximum of 190,000 gallons of diesel a year will be combusted in the testing station. Emissions generated by the engines are captured by a hose and vented to a stack through the roof of the building. There are two testing stations, each with an individual stack. However, at this time, only one engine is tested at a time due to the set-up of the stations.

The chassis dynamometer testing station (2S) uses four large spinning mounts to test fully assembled diesel-fired vehicles not exceeding 600 hp. Vehicles are driven onto the mounts and started. When in gear, the wheels move and spin the mounts while the vehicle stays in place. This allows for testing of engines in fully assembled vehicles. Emissions generated by the engines are captured by a hose attached to the vehicles' exhaust and vented to a stack through the roof of the building.

A fully enclosed paint booth (3S) is used to apply coatings to rebuilt and repaired engines. The coatings are applied with spray guns at a maximum usage rate of 1.5 gallons/hr with an estimated minimum transfer efficiency of 60%. The coating room is kept under slightly negative pressure to capture all of the overspray and direct it to a fiberglass paint arrester filter that is designed to capture a minimum of 99% of the particulate matter generated by the overspray.

A filter cleaner (4S) is used to clean dirty particulate filters from used diesel engines. The dirty filters are loaded into a chamber and a nozzle blows pressurized air and generates electric heat as needed to clean the filters. The exhaust from the cleaning action is vented through a filter cartridge before venting inside the building and then outside through one of the general exhaust fans. The particulate matter outlet emissions from the Filter Cleaner shall not exceed 0.01 gr/dscf pursuant to the manufacturer's specifications of the cartridge filter.

Cummins also operates eight (8) parts washers (collectively identified as 5S). These washers are self-contained free-standing units that use solvents to de-grease and clean various engine parts. Solvents and cleaning agents are used and filtered internally until such time as they are disposed of off-site. VOC emissions from these units occur from evaporation off of the cleaned parts and from the units themselves when the lid is open to insert or remove a part. Therefore, the VOC emissions occur inside the building and are then evacuated by the general exhaust fans.

Additional emissions sources at the facility include the use of a small cooling tower (7S) to cool non-contact water used for heat-transfer cooling of the engine dynamometer. Also on the site is a 4-stroke rich burn (4SRB) natural gas-fired (with propane backup) 67 hp/42 kW<sub>e</sub> (47 kW<sub>e</sub> - propane) Ford Model ESG-642 Emergency Generator Set (6S - Cummins Model GGFE-5938919). This unit will be limited to 500 hours of non-emergency operation and was (according to the permit application) manufactured in November 2007 and installed in May of 2009.

## **SITE INSPECTION**

On July 13, 2016, the writer conducted an inspection of the Cummins' Cross Lanes facility. The facility is located in a commercial/industrial area of Kanawha County approximately 1.5 miles northwest of Institute, WV just off of State Route (SR) 622 (New Goff Mountain Road). The writer was accompanied on the inspection by Mr. Doug Irwin, Parts Manager for Cummins. Observations from the inspection include:

- The existing facility is located along a small access road next to a Bobcat dealership just off of SR 622 approximately 1.5 miles northwest of Institute, WV;
- At the time of the inspections, the facility was in operation and engaged in the repair and refurbishment of various Cummins engines. The facility is also a dealership for new/refurbished Cummins engines and Cummins parts. The facility appeared clean and well maintained. No substantive odors were noticed during the inspection; and
- The occupied dwelling located nearest to the facility is approximately 0.30 miles to the north, also along SR 622.

*Directions:* [Latitude: 38.39663°, Longitude: -81.78790°] From the Cross Lanes exit on I-64, travel south on SR 622 for approximately 1.3 miles to the access road on the right.

## **AIR EMISSIONS AND CALCULATION METHODOLOGIES**

Cummins included in Attachment N of the permit application air emissions calculations for the existing Cross Lanes facility. The following will summarize the calculation methodologies used by Cummins to calculate the potential-to-emit (PTE) of the facility.

### ***Dynamometers (1S, 2S)***

Emissions from both the engine and chassis dynamometers (1E, 2E, and 3E) were based on emission factors as given in AP-42, Section 3.3 (AP-42 is a database of emission factors maintained by USEPA): "Gasoline And Diesel Industrial Engines." Maximum hourly emissions from the engine dynamometers were based on testing a maximum of 2,500 hp diesel-fired engines at any one time. Maximum annual emissions from the units were based on combusting 190,000 gallons of diesel fuel per year (based on a fuel consumption conversion of 7,000 Btu/hp and a diesel heat content of 0.13 mmBtu/gal). Maximum hourly emissions from the chassis dynamometer were based on testing a maximum of one 600 hp engine. Maximum annual emissions from the unit were based on operating 4,380 hours per year.

### ***Paint Booth (3S)***

#### **VOC Emissions From Coating Operations**

VOC and HAP emissions from the paint booth (4E) were based on the worst-case VOC/HAP containing coatings used (as based on constituent percentages listed in the MSDS). It was assumed

R13-3323  
Cummins Crosspoint, LLC  
Cross Lanes

that all VOCs/HAPs within the coatings volatilize and are emitted (no VOC control devices are used). Emission estimates for the application of surface coatings were based on the coating usages for the designated period of time. Maximum annual coating usages are based on the estimated maximum amount of coatings to be used in a twelve-month rolling basis as provided by the applicant. Maximum hourly coating usages were determined by using the full capacity of the spray gun (1.5 gallons/hour).

#### Particulate Matter Emissions From Coating Operations

Particulate matter may be emitted (4E) from the coating operations from the overspray generated in the spray booth. The amount of particulate matter in the coatings are based on the worst-case solids content of the individual coatings currently used (lb/gal) as given in the MSDS or certified product data sheets. Overspray will be limited through the use of spray guns with a transfer efficiency of 60%. The remaining overspray is evacuated from the spray-booths and, after passing through a fiberglass particulate filter, is vented up through the stack. The particulate filter has a collection efficiency of 99% as based on information provided by the vendor. To be conservative, for the purposes of this calculation, all particulate matter emissions are assumed to be PM<sub>2.5</sub>. Maximum annual coating usages are based on the estimated maximum amount of coatings to be used in a twelve-month rolling basis as provided by the applicant. Maximum hourly coating usages were determined by using the full capacity of the spray gun (1.5 gallons/hour).

#### ***Filter Cleaner (4S)***

Particulate matter emissions from the filter cleaner (5E) are based on the guaranteed maximum outlet emissions from the cartridge filter not to exceed 0.01 gr-PM/dscf. Volumetric air flow is based on vendor specification. To be conservative, for the purposes of this calculation, all particulate matter emissions are assumed to be PM<sub>2.5</sub>. The emission point for the filter cleaner is the general exhaust fans of the shop building as the unit vents in side the building.

#### ***Parts Washers (5S)***

VOC emissions from solvent use (5E) in the parts washers are based on use of the worst-case cleaning solvents and the physical characteristics of the cleaner. Additionally, a 90% control factor is applied to account for the time when the units lids are closed mitigating any VOC loss. The emission point for the filter cleaner is the general exhaust fans of the shop building as the unit vents in side the building.

#### ***Emergency Generator***

Potential emissions from the 4SRB natural gas-fired (with propane backup) 67 hp/42 kW<sub>e</sub> (47 kW<sub>e</sub> - propane) Ford Model ESG-642 Emergency Generator (6E - Cummins Model GGFE-5938919) were based on emission factors provided the engine vendor and as given in AP-42, Sections 1.5 (Propane) and 3.2 (natural-gas). The PTE was based on the worst-case emissions of the unit based on calculating emissions from use of each fuel. Hourly emissions were based on the maximum design heat input (MDHI) of the engine of 0.5875 mmBtu/hr and the maximum horsepower rating. Annual emissions were based on 500 hours of operation per year.

## ***Cooling Tower***

Potential emissions from the cooling tower (7E) were based on emission factors as given in AP-42, Section 13.4. Maximum water processing rates of 9,240 gallons/hour and 80,942,400 were used in the calculations. No drift eliminator is used on the cooling tower.

## ***Emissions Summary***

Based on the above estimation methodology as submitted in Attachment N of the permit application, the facility-wide PTE of Cummins' Cross Lanes facility is given in Attachment A to this evaluation.

## **REGULATORY APPLICABILITY**

The existing Cross Lanes facility is subject to the following substantive state air quality rules and regulations: 45CSR7, 45CSR13, and 45CSR21. Each applicable rule (and those that have questionable non-applicability), and Cummins' compliance therewith, will be discussed in detail below.

### ***45CSR7: To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations***

45CSR7 has three substantive requirements potentially applicable to the particulate matter-generating source operations at the Cross Lanes engine repair and rebuild shop: the opacity requirements under Section 3, the mass emission standards under Section 4, and the fugitive emission standards under Section 5. Each of these sections will be discussed below.

#### **45CSR7 Opacity Standards - Section 3**

Section 3.1 sets an opacity limit of 20% on the "particulate matter [emitted] into the open air from any process source operation which is greater than twenty (20) percent opacity." The applicable 45CSR7 source operations located at the Cross Lanes engine repair and rebuild shop are the Paint Booth, Filter Cleaner, and Cooling Tower. The use of particulate matter filters on the Paint Booth and Filter Cleaners should mitigate any substantive opacity problems from these sources. Any particulate matter emitted from the Cooling Tower will be from solids entrained in the evaporated cooling water. Actual emissions from this source are expected to be minimal and the unit is not expected to exceed 20% opacity.

#### **45CSR7 Weight Emission Standards - Section 4**

Section 4.1 of 45CSR7 requires that each manufacturing process source operation or duplicate source operation meet a particulate matter limit based on the weight of material processed through the source operation. The Paint Booth, Filter Cleaner, and Cooling Tower are each defined as a type 'a' source type operation under §45-7-2.38. Based on the exemption given under §45-7-10.5, "[t]he owner or operator of a manufacturing process shall be exempt from subsection 4.1 for

source(s) of emissions that have a potential to emit less than one (1) pound per hour of particulate matter and an aggregate of less than one thousand (1000) pounds per year for all such sources of particulate matter located at the stationary source.” The particulate matter emissions of the Paint Booth and Filter Cleaner are each less than 1.0 lb/hr and 1000 lbs/yr. Therefore, these sources are not subject to the requirements under Section 4.1.

Section 4.1 compliance is given in the following table for the Cooling Tower:

**Table 1: 45CSR7 Section 4.1 Compliance**

Source Operation	Source Type	Process Weight Rate (lb/hr)	Table 45-7A Limit (lb/hr)	PTE (lb/hr)	% of Limit	Control Device
Cooling Tower	A	78,469 <sup>(1)</sup>	32.14	0.77	2.40	None

(1) As based on 9,420 gal/hr water processing rate @ density of 8.33 lb/gallon.

***45CSR13: Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation***

The after-the-fact construction of the existing Cross Lanes facility has a potential to emit a regulated pollutants in excess of the emission thresholds that, pursuant to §45-13-2.24, define the facility as a “stationary source” under 45CSR13. Pursuant to §45-13-5.1, “[n]o person shall cause, suffer, allow or permit the construction . . . and operation of any stationary source to be commenced without . . . obtaining a permit to construct.” Therefore, Cummins is required to obtain a permit under 45CSR13 for the after-the-fact construction and operation of the existing facility.

As required under §45-13-8.3 (“Notice Level A”), Cummins placed a Class I legal advertisement in a “newspaper of *general circulation* in the area where the source is . . . located.” The ad ran on May 27, 2016 in *Charleston Gazette-Mail* and the affidavit of publication for this legal advertisement was submitted on June 23, 2016.

***45CSR21: Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds (Limited Applicability)***

45CSR21 applies to the application of VOC-containing materials in Putnam County, Kanawha County, Cabell County, Wayne County, and Wood County. As the Cummins’ Cross Lanes facility is located in Kanawha County, the facility is potentially subject to the limitations under 45CSR21. Specifically, Section 19 applies to any miscellaneous metal parts and products coating line such as the Paint Booth located at the Cross Lanes facility. However, pursuant to §45-21-19.1(d), an exemption is provided:

The emission limits in this section 19. do not apply to any coating line within a facility whose actual emissions without control devices from all miscellaneous metal part and products coating lines within the facility are less than 6.8 kilograms (kg) (15 pounds [lb]) volatile organic compound (VOC) per day. An owner or operator of a facility whose emissions are below this applicability threshold shall comply with the certification, recordkeeping, and reporting requirements of section 19.7.a.

Cummins has stated in the permit application that the actual emissions of the paint booth are below the applicability thresholds given above. Therefore, the Paint Booth will not be considered an applicable source for the purposes of this permitting action but Cummins will be required to meet the record-keeping requirements under Section 19.7(a) to show on-going compliance.

***45CSR30: Requirements for Operating Permits - (NON APPLICABILITY)***

45CSR30 provides for the establishment of a comprehensive air quality permitting system consistent with the requirements of Title V of the Clean Air Act. The existing Cross Lanes facility does not meet the definition of a “major source under §112 of the Clean Air Act” as outlined under §45-30-2.26 and clarified (fugitive policy) under 45CSR30b. The facility-wide PTE of any regulated pollutant does not exceed 100 TPY, 10 TPY of any individual HAP, or 25 TPY of aggregate HAPs.

Further, no equipment or processes at the proposed facility are subject to a federal standard under 40 CFR 60, 61, or 63. Therefore, Title V will not apply to the modified facility.

***40 CFR 60 Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.***

Cummins existing 4SRB natural gas-fired (with propane backup) 67 hp/42 kW<sub>e</sub> (47 kW<sub>e</sub> - propane) Ford Model ESG-642 Emergency Generator (Cummins Model GGFE-5938919) is defined under 40 CFR 60, Subpart JJJJ as a stationary spark-ignition internal combustion engine (SI ICE) and is, pursuant to §60.4230, potentially subject to the applicable provisions of the rule. However, pursuant to §60.4230(a)(4)(iv), emergency engines with a maximum engine power greater than 25 hp manufactured prior to January 1, 2009 are not subject to Subpart JJJJ. The Cummins emergency engine was, according to information provided by Cummins, manufactured on November 26, 2007. Therefore, the engine is not subject to any emission standards under Subpart JJJJ.

Additionally, pursuant to §60.4230(b), engines tested in the dynamometers are not subject to Subpart JJJJ.

***Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (Non-Applicability)***

The Cross Lanes facility does not utilize any stationary compression ignition internal combustion engines and pursuant to §60.4200(b), engines tested in the dynamometers are not subject to Subpart IIII. Therefore, Subpart IIII does not apply.

***40 CFR 63 Subpart ZZZZ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines***

On June 1, 2013 the DAQ took delegation of the area source provisions of 40 CFR 63, Subpart ZZZZ. As the Cross Lanes facility is defined as an area source of HAPs (see Attachment A), the facility is subject to applicable requirements of Subpart ZZZZ. Pursuant to §63.6590(c):

An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

§63.6590(c)(1) specifies that “[a] new or reconstructed stationary RICE located at an area source” is defined as a RICE that shows compliance with the requirements of Subpart ZZZZ by “meeting the requirements of . . . 40 CFR part 60 subpart JJJJ, for spark ignition engines.” Pursuant to §63.6590(a)(2)(iii), a “stationary RICE located at an area source of HAP emissions is new if [the applicant] commenced construction of the stationary RICE on or after June 12, 2006.” The Ford Model ESG-642 emergency generator located at the Cross Lanes facility is defined as a new stationary RICE and, therefore, will show compliance with Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart JJJJ. Compliance with Subpart JJJJ is discussed above.

## **TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS**

This section provides an analysis for those regulated pollutants that may be emitted from the existing Cross Lanes facility and that are not classified as "criteria pollutants." Criteria pollutants are defined as Carbon Monoxide (CO), Lead (Pb), Oxides of Nitrogen (NO<sub>x</sub>), Ozone, Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and Sulfur Dioxide (SO<sub>2</sub>). These pollutants have National Ambient Air Quality Standards (NAAQS) set for each that are designed to protect the public health and welfare. Other pollutants of concern, although designated as non-criteria and without national concentration standards, are regulated through various federal and programs designed to limit their emissions and public exposure. These programs include federal source-specific Hazardous Air Pollutants (HAPs) limits promulgated under 40 CFR 61 (NESHAPS) and 40 CFR 63 (MACT). Any potential applicability to these programs for the modified sources were discussed above under REGULATORY APPLICABILITY.

The majority of non-criteria regulated pollutants fall under the definition of HAPs which, with some revision since, were 188 compounds identified under Section 112(b) of the Clean Air Act (CAA) as pollutants or groups of pollutants that EPA knows or suspects may cause cancer or other serious human health effects. The following table lists each HAP with a facility-wide PTE above 0.05 TPY () and the associated carcinogenic risk (as based on analysis provided in the Integrated Risk Information System (IRIS)):

**Table 2: Potential HAPs - Carcinogenic Risk**

HAPs	Type	Known/Suspected Carcinogen	Classification
Benzene	VOC	Yes	Category A - Known Human Carcinogen
Ethyl-benzene	VOC	No	Category D - Not Classifiable
Formaldehyde	VOC	Yes	B1 - Probable Human Carcinogen
Methyl Isobutyl Ketone	VOC	No	Inadequate Data
Xylenes	VOC	No	Inadequate Data

All HAPs have other non-carcinogenic chronic and acute effects. These adverse health affects may be associated with a wide range of ambient concentrations and exposure times and are influenced by source-specific characteristics such as emission rates and local meteorological conditions. Health impacts are also dependent on multiple factors that affect variability in humans such as genetics, age, health status (e.g., the presence of pre-existing disease) and lifestyle. As stated previously, *there are no federal or state ambient air quality standards for these specific chemicals*. For a complete discussion of the known health effects of each compound refer to the IRIS database located at [www.epa.gov/iris](http://www.epa.gov/iris).

### **AIR QUALITY IMPACT ANALYSIS**

The estimated maximum emissions of the existing facility are less than applicability thresholds that would define the existing facility as “major” under 45CSR14 and, therefore, no air quality impacts modeling analysis was required. Additionally, based on the nature and location of the source, an air quality impacts modeling analysis was not required under 45CSR13, Section 7.

### **MONITORING, COMPLIANCE DEMONSTRATIONS, REPORTING, AND RECORDING OF OPERATIONS**

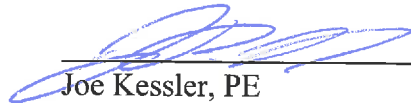
The draft permit uses parametric usage monitoring (1S, 2S, 6S, and 7S) and actual emissions tracking (4S) for on-going compliance demonstrations. Refer to Section 4.2 of the draft permit for the unit-specific monitoring, compliance demonstration, reporting, and record-keeping requirements (MRR).

### **PERFORMANCE TESTING OF OPERATIONS**

The following substantive performance testing requirement shall be required: At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of the draft permit, Cummins shall be required to conduct or have conducted test(s) to determine compliance with the emission limitations established in this permit and/or applicable regulations.

### **RECOMMENDATION TO DIRECTOR**

The information provided in the permit application indicates that compliance with all applicable state and federal air quality regulations will be achieved. Therefore, I recommend to the Director the issuance of a Permit Number R13-3323 to Cummins Crosspoint, LLC for the after-the-fact construction of the Cross Lanes Facility located near Cross Lanes, Kanawha County, WV.

  
\_\_\_\_\_  
Joe Kessler, PE  
Engineer

  
\_\_\_\_\_  
Date

R13-3323  
Cummins Crosspoint, LLC  
Cross Lanes

**Attachment A: Facility-Wide PTE**  
**Cummins Crosspoint, LLC: Cross Lanes**  
**Permit Number R13-3323: Facility ID 039-00671**

Emission Unit	EP ID	CO		NO <sub>x</sub>		PM <sup>(1)</sup>		SO <sub>x</sub>		VOC		Total HAPs	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Engine Dynamometers	1E, 2E	16.70	11.75	77.50	54.66	5.50	3.84	5.13	3.59	6.29	4.46	0.07	0.21
Chassis Dynamometer	3E	4.01	8.78	18.60	40.73	1.32	2.89	1.23	2.69	1.51	3.30	0.02	0.04
Paint Booth	4E	0.00	0.00	0.00	0.00	0.06	0.24	0.00	0.00	5.21	22.81	3.23	14.13
Filter Cleaner	5E	0.00	0.00	0.00	0.00	0.11	0.49	0.00	0.00	0.00	0.00	0.00	0.00
Parts Washers	6E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.14	0.00	0.00
Emergency Generator	7E	0.42	0.11	1.95	0.49	0.14	0.04	0.13	0.03	0.16	0.04	~0.00	~0.00
Cooling Tower	8E	0.00	0.00	0.00	0.00	0.18	0.77	0.00	0.00	0.00	0.00	0.00	0.00
<b>Facility-Wide Total →</b>		<b>21.13</b>	<b>20.63</b>	<b>98.05</b>	<b>95.88</b>	<b>7.30</b>	<b>8.27</b>	<b>6.48</b>	<b>6.32</b>	<b>13.19</b>	<b>30.76</b>	<b>3.31</b>	<b>14.38</b>

(1) All particular matter emissions are assumed to be 2.5 microns or less.

(2) No individual HAP has a PTE over 10 TPY (Xylene is the largest contributor). As the PTE of all individual HAPs are less than 10 TPY the PTE of total HAPs is less than 25 TPY, the Cross Lanes facility is defined as a minor (area) source for purposes of 40 CFR 61 and 40CFR63.

# INTERNAL PERMITTING DOCUMENT TRACKING MANIFEST

Company Name CUMMENS CROSSCOUNTRY, LLC

Permitting Action Number R13-3223 Total Days 125 DAQ Days 42

## Permitting Action:

- |   |   |                                      |
|---|---|--------------------------------------|
| <input type="radio"/> Permit Determination  | <input type="radio"/> Temporary                     | <input type="radio"/> Modification   |
| <input type="radio"/> General Permit        | <input type="radio"/> Relocation                    | <input type="radio"/> PSD (Rule 14)  |
| <input type="radio"/> Administrative Update | <input checked="" type="radio"/> Construction (A+F) | <input type="radio"/> NNSR (Rule 19) |

## Documents Attached:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Engineering Evaluation/Memo | <input checked="" type="checkbox"/> Completed Database Sheet |
| <input checked="" type="checkbox"/> Draft Permit                | <input type="radio"/> Withdrawal                             |
| <input checked="" type="checkbox"/> Notice                      | <input type="radio"/> Letter                                 |
| <input type="radio"/> Denial                                    | <input type="radio"/> Other (specify) _____                  |
| <input type="radio"/> Final Permit/General Permit Registration  | _____  |

Date	From	To	Action Requested
9/27/16	Joe Kessler	Bev McKeone	Notice Approval
10/19	Bw	Joe	Cost Notice

NOTE: Retain a copy of this manifest for your records when transmitting your document(s).

**Kessler, Joseph R**

---

**From:** John W Peaper <john.w.peaper@cummins.com>  
**Sent:** Tuesday, June 28, 2016 9:44 AM  
**To:** Kessler, Joseph R  
**Cc:** Jay Phillips; Hutter Ragland  
**Subject:** FW: R13-3323 Permit Application Status  
**Attachments:** Cross Lanes Sound Data Sheet.pdf; Cross Lanes Exhaust Emission Data Sheet.pdf; Cross Lanes Gen Pics.pptx; doa\_06-22-2016-132330.pdf; Cross Lane Legal Advertising Notice.pdf

Joe,

Nice to talk to you today, attached is what was sent in the packet last Thursday. Please let me know if there is anything else you require.

Please contact Jay Phillips to schedule you branch visit  
304-769-1012 X8306

OR

Hutter Ragland  
304-769-1012 X8320

Thanks

John Peaper  
HSE Manager  
Cummins Sales and Service  
317-240-1965

*Entire Document*  
**NON-CONFIDENTIAL**

I.D. No. 039-00671 Reg. 3323  
Company CUMMINS  
Facility Cross Lanes Region   
Initials JW

**RE: Application Status: Incomplete**  
**Cummins Crosspoint, LLC**  
**Cross Lanes**  
**Permit Application: R13-3323**  
**Plant ID No.: 039-00671**

Dear Mr. Peaper:

Your application for an after-the-fact construction permit was received by the Division of Air Quality (DAQ) on May 25, 2016 and assigned to the writer for review. Upon an initial review of the application, it has been determined that the following items need to be addressed prior to the application being deemed complete:

1. The original affidavit of publication from the required Class I Legal Advertisement has not been submitted;
2. Please provide documentation that Mr. John Peaper meets the definition of "Responsible Official" under §45-13-2.22. The attached form may be used to delegate authority to an individual; and
3. Please provide the make, model number, year of manufacture, any available vendor emissions data, and EPA Emissions Certificate of Conformity (if available) for the Emergency Generator.

Please address the above items as quickly as possible in order to facilitate review of the permit application. Should you have any questions, please contact me at (304) 926-0499 ext. 1219.

Joe Kessler, PE  
Engineer  
West Virginia Division of Air Quality  
601-57th St., SE  
Charleston, WV 25304  
Phone: (304) 926-0499 x1219  
Fax: (304) 926-0478  
[Joseph.r.kessler@wv.gov](mailto:Joseph.r.kessler@wv.gov)

## Kessler, Joseph R

---

**From:** Jay Phillips <jay.phillips@cummins.com>  
**Sent:** Tuesday, June 28, 2016 12:35 PM  
**To:** Kessler, Joseph R; John W Peaper  
**Cc:** Hutter Ragland  
**Subject:** RE: R13-3323 Permit Application Status

Okay by me. I will actually be on vacation that week but Hutter or my Parts Manager Jamie Rhodes will be here.

### Jay Phillips

#### Cummins Sales and Service

Branch Manager, Cross Lanes WV  
Ohio Valley Area, East Region

Office 304-769-1012 EXT. 8306

Cell Phone 304-539-8280

[jay.phillips@cummins.com](mailto:jay.phillips@cummins.com)

**From:** Kessler, Joseph R [mailto:Joseph.R.Kessler@wv.gov]  
**Sent:** Tuesday, June 28, 2016 11:26 AM  
**To:** Jay Phillips <jay.phillips@cummins.com>; John W Peaper <john.w.peaper@cummins.com>  
**Cc:** Hutter Ragland <hutter.ragland@cummins.com>  
**Subject:** RE: R13-3323 Permit Application Status

Due to a scheduling conflict, I would like to move the inspection back a week to Wednesday, July 13.

Thanks

Joe

**From:** Jay Phillips [mailto:[jay.phillips@cummins.com](mailto:jay.phillips@cummins.com)]  
**Sent:** Tuesday, June 28, 2016 9:48 AM  
**To:** John W Peaper <[john.w.peaper@cummins.com](mailto:john.w.peaper@cummins.com)>; Kessler, Joseph R <[Joseph.R.Kessler@wv.gov](mailto:Joseph.R.Kessler@wv.gov)>  
**Cc:** Hutter Ragland <[hutter.ragland@cummins.com](mailto:hutter.ragland@cummins.com)>  
**Subject:** RE: R13-3323 Permit Application Status

I just talked with him and he will visit next Wednesday afternoon July 6.

### Jay Phillips

#### Cummins Sales and Service

Branch Manager, Cross Lanes WV  
Ohio Valley Area, East Region

Office 304-769-1012 EXT. 8306  
Cell Phone 304-539-8280  
[jay.phillips@cummins.com](mailto:jay.phillips@cummins.com)

**From:** John W Peaper  
**Sent:** Tuesday, June 28, 2016 9:44 AM  
**To:** [joseph.r.kessler@wv.gov](mailto:joseph.r.kessler@wv.gov)  
**Cc:** Jay Phillips <[jay.phillips@cummins.com](mailto:jay.phillips@cummins.com)>; Hutter Ragland <[hutter.ragland@cummins.com](mailto:hutter.ragland@cummins.com)>  
**Subject:** FW: R13-3323 Permit Application Status

Joe,

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Please contact Jay Phillips to schedule you branch visit  
304-769-1012 X8306  
OR  
Hutter Ragland  
304-769-1012 X8320

Thanks

John Peaper  
HSE Manager  
Cummins Sales and Service  
317-240-1965

**RE: Application Status: Incomplete  
Cummins Crosspoint, LLC  
Cross Lanes  
Permit Application: R13-3323  
Plant ID No.: 039-00671**

Dear Mr. Peaper:

Your application for an after-the-fact construction permit was received by the Division of Air Quality (DAQ) on May 25, 2016 and assigned to the writer for review. Upon an initial review of the application, it has been determined that the following items need to be addressed prior to the application being deemed complete:

1. The original affidavit of publication from the required Class I Legal Advertisement has not been submitted;
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Please address the above items as quickly as possible in order to facilitate review of the permit application. Should you have any questions, please contact me at (304) 926-0499 ext. 1219.

Joe Kessler, PE  
Engineer  
West Virginia Division of Air Quality  
601-57th St., SE  
Charleston, WV 25304  
Phone: (304) 926-0499 x1219  
Fax: (304) 926-0478  
[Joseph.r.kessler@wv.gov](mailto:Joseph.r.kessler@wv.gov)

## Kessler, Joseph R

---

**From:** John W Peaper <[john.w.peaper@cummins.com](mailto:john.w.peaper@cummins.com)>  
**Sent:** Thursday, July 28, 2016 9:48 AM  
**To:** Kessler, Joseph R  
**Subject:** RE: R13-3323 Permit Application Status  
**Attachments:** 2016\_0727-cummins(cl,wv)\_nsr\_permit\_app\_em\_gen\_revision(pkg)-f1.pdf

Joe,

I have attached the revised application data, I will follow up with a paper copy via Fed-Ex.

Thank you for your patience

John Peaper  
HSE Manager  
Cummins Sales and Service  
317-240-1965

**From:** Kessler, Joseph R [<mailto:Joseph.R.Kessler@wv.gov>]  
**Sent:** Tuesday, July 19, 2016 11:08 AM  
**To:** John W Peaper <[john.w.peaper@cummins.com](mailto:john.w.peaper@cummins.com)>  
**Subject:** RE: R13-3323 Permit Application Status

John, just an update on the permit application status for Cross Lanes. I have received the affidavit and the Responsible Official. However, I verified on-site that the Emergency Generator is a fired by natural gas. So, to be able to deem the application complete, I will need it revised with the correct EG information – new EG emissions calculations, Emission Points Data Sheet, & Emission Unit Data Sheet at a minimum. You will not have to run a new ad. If you have any questions, let me know.

Thanks

Joe Kessler

**From:** John W Peaper [<mailto:john.w.peaper@cummins.com>]  
**Sent:** Tuesday, July 12, 2016 9:48 AM  
**To:** Kessler, Joseph R <[Joseph.R.Kessler@wv.gov](mailto:Joseph.R.Kessler@wv.gov)>  
**Subject:** RE: R13-3323 Permit Application Status

Joe,

Thanks, I am with auditors all week, But you can always call my cell if you need me

317-697-9140

John Peaper  
HSE Manager

Cummins Sales and Service  
317-240-1965

**From:** Kessler, Joseph R [<mailto:Joseph.R.Kessler@wv.gov>]  
**Sent:** Tuesday, July 12, 2016 9:37 AM  
**To:** Jay Phillips <[jay.phillips@cummins.com](mailto:jay.phillips@cummins.com)>; John W Peaper <[john.w.peaper@cummins.com](mailto:john.w.peaper@cummins.com)>  
**Cc:** Hutter Ragland <[hutter.ragland@cummins.com](mailto:hutter.ragland@cummins.com)>  
**Subject:** RE: R13-3323 Permit Application Status

Just to confirm, I am planning on stopping by the Cross Lanes site tomorrow afternoon. I have a couple of inspections before, so the time is approximate. My best guess is about 2:45.

Thanks

Joe Kessler

**From:** Jay Phillips [<mailto:jay.phillips@cummins.com>]  
**Sent:** Tuesday, June 28, 2016 12:35 PM  
**To:** Kessler, Joseph R <[Joseph.R.Kessler@wv.gov](mailto:Joseph.R.Kessler@wv.gov)>; John W Peaper <[john.w.peaper@cummins.com](mailto:john.w.peaper@cummins.com)>  
**Cc:** Hutter Ragland <[hutter.ragland@cummins.com](mailto:hutter.ragland@cummins.com)>  
**Subject:** RE: R13-3323 Permit Application Status

Okay by me. I will actually be on vacation that week but Hutter or my Parts Manager Jamie Rhodes will be here.

**Jay Phillips**  
**Cummins Sales and Service**  
Branch Manager, Cross Lanes WV  
Ohio Valley Area, East Region

Office 304-769-1012 EXT. 8306  
Cell Phone 304-539-8280  
[jay.phillips@cummins.com](mailto:jay.phillips@cummins.com)

**From:** Kessler, Joseph R [<mailto:Joseph.R.Kessler@wv.gov>]  
**Sent:** Tuesday, June 28, 2016 11:26 AM  
**To:** Jay Phillips <[jay.phillips@cummins.com](mailto:jay.phillips@cummins.com)>; John W Peaper <[john.w.peaper@cummins.com](mailto:john.w.peaper@cummins.com)>  
**Cc:** Hutter Ragland <[hutter.ragland@cummins.com](mailto:hutter.ragland@cummins.com)>  
**Subject:** RE: R13-3323 Permit Application Status

Due to a scheduling conflict, I would like to move the inspection back a week to Wednesday, July 13.

Thanks

Joe

**From:** Jay Phillips [<mailto:jay.phillips@cummins.com>]

**Sent:** Tuesday, June 28, 2016 9:48 AM

**To:** John W Peaper <[john.w.peaper@cummins.com](mailto:john.w.peaper@cummins.com)>; Kessler, Joseph R <[Joseph.R.Kessler@wv.gov](mailto:Joseph.R.Kessler@wv.gov)>

**Cc:** Hutter Ragland <[hutter.ragland@cummins.com](mailto:hutter.ragland@cummins.com)>

**Subject:** RE: R13-3323 Permit Application Status

I just talked with him and he will visit next Wednesday afternoon July 6.

**Jay Phillips**

**Cummins Sales and Service**

Branch Manager, Cross Lanes WV

Ohio Valley Area, East Region

Office 304-769-1012 EXT. 8306

Cell Phone 304-539-8280

[jay.phillips@cummins.com](mailto:jay.phillips@cummins.com)

**From:** John W Peaper

**Sent:** Tuesday, June 28, 2016 9:44 AM

**To:** [joseph.r.kessler@wv.gov](mailto:joseph.r.kessler@wv.gov)

**Cc:** Jay Phillips <[jay.phillips@cummins.com](mailto:jay.phillips@cummins.com)>; Hutter Ragland <[hutter.ragland@cummins.com](mailto:hutter.ragland@cummins.com)>

**Subject:** FW: R13-3323 Permit Application Status

Joe,

Nice to talk to you today, attached is what was sent in the packet last Thursday. Please let me know if there is anything else you require.

Please contact Jay Phillips to schedule you branch visit

304-769-1012 X8306

OR

Hutter Ragland

304-769-1012 X8320

Thanks

John Peaper  
HSE Manager

**RE: Application Status: Incomplete  
Cummins Crosspoint, LLC  
Cross Lanes  
Permit Application: R13-3323  
Plant ID No.: 039-00671**

Dear Mr. Peaper:

Your application for an after-the-fact construction permit was received by the Division of Air Quality (DAQ) on May 25, 2016 and assigned to the writer for review. Upon an initial review of the application, it has been determined that the following items need to be addressed prior to the application being deemed complete:

1. The original affidavit of publication from the required Class I Legal Advertisement has not been submitted;
2. Please provide documentation that Mr. John Peaper meets the definition of "Responsible Official" under §45-13-2.22. The attached form may be used to delegate authority to an individual; and
3. Please provide the make, model number, year of manufacture, any available vendor emissions data, and EPA Emissions Certificate of Conformity (if available) for the Emergency Generator.

Please address the above items as quickly as possible in order to facilitate review of the permit application. Should you have any questions, please contact me at (304) 926-0499 ext. 1219.

Joe Kessler, PE  
Engineer  
West Virginia Division of Air Quality  
601-57th St., SE  
Charleston, WV 25304  
Phone: (304) 926-0499 x1219  
Fax: (304) 926-0478  
[Joseph.r.kessler@wv.gov](mailto:Joseph.r.kessler@wv.gov)

## Kessler, Joseph R

---

**From:** Kessler, Joseph R  
**Sent:** Tuesday, August 16, 2016 10:42 AM  
**To:** John W Peaper  
**Cc:** Kessler, Joseph R  
**Subject:** R13-3323 Permit Application Status

**RE: Application Status: Complete**  
**Cummins Crosspoint, LLC**  
**Cross Lanes**  
**Permit Application: R13-3323**  
**Plant ID No.: 039-00671**

*Entire Document*  
**NON-CONFIDENTIAL**

Dear Mr. Peaper:

Your application for an after-the-fact construction permit was received by the Division of Air Quality (DAQ) on May 25, 2016 and assigned to the writer for review. Upon an initial review of the application, it was determined that additional information needed to be submitted prior to the application being deemed complete. This information was subsequently submitted on July 29, 2016 and the application has now been deemed complete as of the date of this e-mail. The ninety (90) day statutory time frame began on that day.

Should you have any questions, please contact me at (304) 926-0499 ext. 1219.

Joe Kessler, PE  
Engineer  
West Virginia Division of Air Quality  
601-57th St., SE  
Charleston, WV 25304  
Phone: (304) 926-0499 x1219  
Fax: (304) 926-0478  
[Joseph.r.kessler@wv.gov](mailto:Joseph.r.kessler@wv.gov)

**Attachment R  
AUTHORITY OF CORPORATION  
OR OTHER BUSINESS ENTITY (DOMESTIC OR FOREIGN)**

TO: The West Virginia Department of Environmental Protection,  
Division of Air Quality

DATE: June 22, 2016

ATTN.: Director

Corporation's / other business entity's Federal Employer I.D. Number 205012258

The undersigned hereby files with the West Virginia Department of Environmental Protection, Division of Air Quality, a permit application and hereby certifies that the said name is a trade name which is used in the conduct of an incorporated business or other business entity.

Further, the corporation or the business entity certifies as follows:

(1) John W. Peaper (is/are) the authorized representative(s) and in that capacity may represent the interest of the corporation or the business entity and may obligate and legally bind the corporation or the business entity.

(2) The corporation or the business entity is authorized to do business in the State of West Virginia.

(3) If the corporation or the business entity changes its authorized representative(s), the corporation or the business entity shall notify the Director of the West Virginia Department of Environmental Protection, Division of Air Quality, immediately upon such change.

CHA R Phil  
\_\_\_\_\_  
President or Other Authorized Officer  
(Vice President, Secretary, Treasurer or other  
official in charge of a principal business function of  
the corporation or the business entity)

(If not the President, then the corporation or the business entity must submit certified minutes or bylaws stating legal authority of other authorized officer to bind the corporation or the business entity).

\_\_\_\_\_  
Secretary

Cummins Crosspoint, LLC

\_\_\_\_\_  
Name of Corporation or business entity

## UC Defaulted Accounts Search Results

Sorry, no records matching your criteria were found.

FEIN:

Business name:

CUMMINS CROSSPOINT, LLC

Doing business

as/Trading as:

Please use your browsers back button to try again.

<a href="#">WorkforceWV</a>	<a href="#">Unemployment Compensation</a>	<a href="#">Offices of the Insurance Commissioner</a>
-----------------------------	---	---

## UC Defaulted Accounts Search Results

Sorry, no records matching your criteria were found.

FEIN: 205012258

Business name:

Doing business as/Trading as:

Please use your browsers back button to try again.

<a href="#">WorkforceWV</a>	<a href="#">Unemployment Compensation</a>	<a href="#">Offices of the Insurance Commissioner</a>
-----------------------------	---	---

**Kessler, Joseph R**

---

**From:** Ward, Beth A  
**Sent:** Monday, June 06, 2016 1:32 PM  
**To:** Kessler, Joseph R  
**Subject:** CUMMINS CROSSPOINT LLC PERMIT APPLICATION FEE

This is the receipt for payment received from:

CUMMINS CROSSPOINT LLC, CROSS LANES, CHECK NUMBER 331292, CHECK DATE 06/02/2016, \$1,000.00  
R13-3323 ID# 039-00671

OASIS Deposit CR 1600133376

Thank You!

*Beth Ward*

WV DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BTO FISCAL  
601 57<sup>TH</sup> STREET SE  
CHARLESTON, WV 25304  
(304) 926-0499 EXT 1846  
[beth.a.ward@wv.gov](mailto:beth.a.ward@wv.gov)

**Kessler, Joseph R**

---

**From:** Ward, Beth A  
**Sent:** Friday, May 27, 2016 3:31 PM  
**To:** Kessler, Joseph R  
**Subject:** CUMMINS CROSSPOINT LLC PERMIT APPLICATION FEE

This is the receipt for payment received from:

CUMMINS CROSSPOINT LLC, CROSS LANES, CHECK NUMBER 331127, CHECK DATE 05/24/2016, \$2,500.00  
R13-3323 ID# 039-00671

OASIS Deposit CR 1600130632

Thank You!

*Beth Ward*

WV DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BTO FISCAL  
601 57<sup>TH</sup> STREET SE  
CHARLESTON, WV 25304  
(304) 926-0499 EXT 1846  
[beth.a.ward@wv.gov](mailto:beth.a.ward@wv.gov)



## ATTACHMENT D

### Regulatory Discussion

*Entire Document*  
**NON-CONFIDENTIAL**

I.D. No. 03900671 Reg. 3323  
Company CUMMINS CRUISER  
Facility Cross Lake Region         
Initials fn

## Regulatory Discussion

### FEDERAL REGULATIONS

Wet spray painting occurs in a paint booth (source 3S) at this facility, but it is not subject to 40 CFR Subpart 63 HHHHHH as there are no target HAP metals in the coatings.

This facility operates an emergency generator (source 6S) as needed. It is a 42 kW natural gas (47 kW propane backup) fired engine manufactured in September of 2007. As such, the unit is subject to 40 CFR 63 Subpart ZZZZ (RICE). The unit is subject to all applicable requirements for new spark ignition emergency generators at an area source of HAPs under 40 CFR 60 Subpart JJJJ.

The potential emissions associated with this facility exceed the Title V threshold for NO<sub>x</sub> (100 tpy). An annual limit on fuel usage for the Engine Dynamometer (dyno) (Source 1S) of 190,000 gallons per year on a 12-month rolling average is being proposed in order to remain below Title V emission thresholds and avoid Title V requirements. This limit on fuel usage at the Engine Dyno would result in facility-wide maximum emissions of 95.91 tpy of NO<sub>x</sub> (all other regulated pollutants' potential to emit falls below major source thresholds). Cummins proposes monthly recordkeeping for fuel used in the Engine Dyno in order to show compliance with this proposed limit. No other emission units at the facility would require a production limit in order to avoid exceeding Title V emission thresholds.

There are no other federal standards that are applicable for this project. No National Emission Standard for Hazardous Air Pollutant (NESHAP) standard has been promulgated at 40 CFR 61 that would be applicable to the proposed project.

### STATE REGULATIONS

West Virginia Rule 45CSR21 regulates prevention and control of air pollution from the emission of volatile organic compounds. 45-21-19 regulates the coating of miscellaneous metal parts. The facility is exempt from the emission limits of this section per 45-21-19.1.d as actual emissions prior to control devices do not exceed 15 pounds of VOC per day. However, the facility must comply with the certification, recordkeeping, and reporting requirements of section 45-21-19-7.

West Virginia Rule 45CSR13 provides the requirements for permits for construction, modification, and operation of stationary sources of air pollutants, notification requirements, administrative updates, temporary permits, general permits, permission to commence construction, and procedures for evaluation. This facility is defined as a Stationary Source per part 45-13-2.24 of this rule as the uncontrolled potential emissions exceed six (6) pounds per hour, and therefore is subject to this rule.

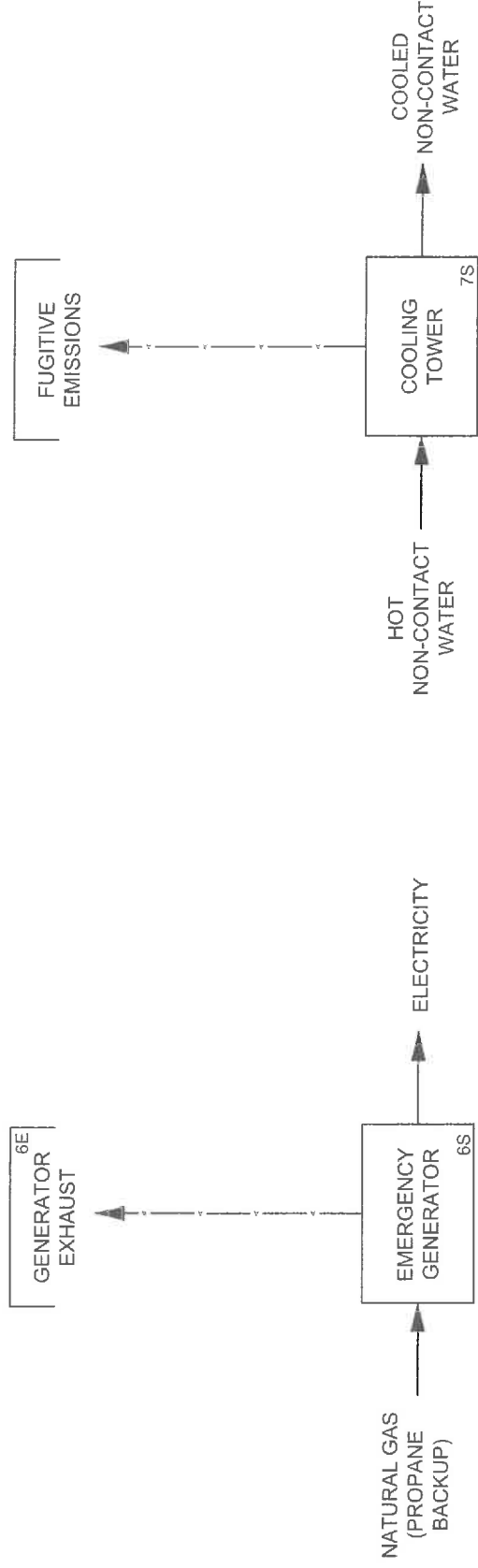
This facility is not subject to West Virginia Rule 45CSR30 "Requirements for Operating Permits" as the facility is not classified as a Major Source defined in 45-30-2.26 due to the proposed production limitations which will limit all regulated pollutants below Major Source thresholds.

West Virginia Rule 45CSR29 provides requirements for submission of emission statements for VOC and NO<sub>x</sub>. This rule may apply to this facility as it is located in Kanawha County and potential VOC and NO<sub>x</sub>

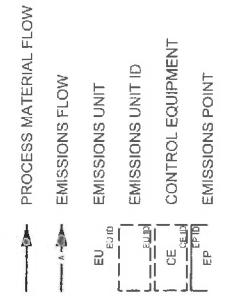
emissions are greater than 25 tons per year. However, if actual emissions of VOC and NOx are below 25 tons per year the facility is exempt per 45-29-3.1.

**ATTACHMENT F**

**Process Flow Diagrams**



#### LEGEND



#### NOTES

1. THIS FIGURE REPRESENTS THE EMERGENCY GENERATOR LOCATED OUTDOORS EMITTING VIA GENERAL EQUIPMENT EXHAUST AND THE COOLING TOWER EXHAUSTING VIA FUGITIVE EMISSIONS

**HALEY ALDRICH**

CUMMINS CROSSPOINT, LLC  
 602 NEW GOFF MOUNTAIN RD.  
 CROSS LINES, WV

### ATTACHMENT F PROCESS FLOW DIAGRAM EM. GEN. & COOLING TOWER

SCALE: NONE  
 APRIL 2016

FIGURE 5 OF 5

## **ATTACHMENT G**

### **Process Description**

## Process Description

The Cummins Crosspoint, LLC facility located at 602 New Goff Mountain Rd. in Cross Lanes, West Virginia is an engine repair and rebuild shop. The facility performs various maintenance and repair on engines and also includes a paint booth and dynamometer test stations.

The Engine Dynamometer (dyno) testing station [1S] is rated to test engines up to 2,500 hp. The only emissions produced are based on fuel combustion and are generated directly from the engine being tested. These emissions exhaust via two stacks outdoors [1E & 2E]. Cummins is proposing a 190,000 gallon (or natural gas equivalent) per year on a 12-month rolling average fuel usage limit. Diesel is the primary fuel combusted, but the facility would prefer to have the option to run cleaner natural gas engines in the future. Emissions are based solely on diesel combustion as a worst-case scenario.

The Chassis Dyno testing station [2S] tests fully assembled vehicles up to 600 hp. The only emissions produced are based on fuel combustion and are generated directly from the vehicle's engine being tested and exhaust via an outdoor stack [3E]. Diesel is the primary fuel combusted, but the facility would prefer to have the option to run cleaner natural gas engines in the future. Emissions are based solely on diesel combustion as a worst-case scenario.

There is also a completely enclosed paint booth [3S]. Coatings are applied to engines via spray guns at a maximum usage rate of 1.5 gallons of coating per hour. The booth air is pulled through fabric filters then exhausts through a stack [4E]. Emissions will vary depending on the coating applied. The emissions calculations included in this application package are based on production using the worst-case scenario as applied coatings (highest solids content for PM/PM10/PM2.5 emissions, highest VOC content for VOC emissions, and highest HAPs content for HAPs emissions).

The Filter Cleaner (DPF Cleaner) [4S] cleans diesel particulate filters. The dirty filter is loaded into the chamber and a nozzle blows pressurized air and generates electric heat as needed to clean the filter. The exhaust is then run through two filters in the piece of equipment before venting inside the facility and out general building openings [5E]. The emissions are very limited but may vary slightly based on the loading of each filter.

The facility also operates Parts Washers [5S] consisting of (2) Repair Shop Crystal Clean Parts Washers, (2) MRC Rotary Parts Washers, and (4) MRC Various Parts Washers. Emissions are based solely on the evaporation of the material stored in the parts washer and will vent inside the building and out general openings [5E]. Actual emissions will vary depending on the material used in the parts washer; however the potential emissions included with this application assume each parts washer is using the worst-case scenario material.

There is a natural gas-fired emergency generator [6S] with propane backup located onsite rated at 42 kW for natural gas and 47 kW for propane. This emission unit only operates during emergencies and for limited testing and maintenance. The only emissions associated with this unit are from fuel combustion that vents outdoors [6E].

The Cooling Tower [7S] is used to cool non-contact water used for heat-transfer cooling of the Engine Dyno. The emissions are based on naturally occurring solids in the cooling water. When the cooling water evaporates the solids therein can be released as fugitive emissions [Fugitives].

This is the initial permit application for this facility.

## **ATTACHMENT J**

### **Emission Points Data Summary Sheet (Table 1 and 2)**

**Attachment J**  
**EMISSION POINTS DATA SUMMARY SHEET**

**Table 1: Emissions Data**

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type <sup>1</sup>	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS <sup>3</sup> (Speciate VOCs & HAPs)	Maximum Potential Uncontrolled Emissions <sup>4</sup>		Maximum Potential Controlled Emissions <sup>5</sup>		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used <sup>6</sup>	Emission Concentration <sup>7</sup> (ppmv or mg/m <sup>4</sup> )
		ID No.	Source	ID No.	Device Type	Short Term <sup>2</sup>	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
1E	Horizontal Stack	1S	Engine Dyno	N/A	N/A	17.1 hrs/d	6257	PM/PM10/PM2.5	2.75	1.92	2.75	1.92	Gas	Emission Factor (Restricted Emissions)	Unknown
								NOx	38.75	27.33	38.75	27.33			
								CO	8.35	5.89	8.35	5.89			
								SO2	2.56	1.80	2.56	1.80			
								VOC	3.14	2.23	3.14	2.23			
								CO2e	1438	1016	1438	1016			
								Total HAPs	0.03	0.02	0.03	0.02			
2E	Horizontal Stack	1S	Engine Dyno	N/A	N/A	17.1 hrs/d	6257	PM/PM10/PM2.5	2.75	1.92	2.75	1.92	Gas	Emission Factor (Restricted Emissions)	Unknown
								NOx	38.75	27.33	38.75	27.33			
								CO	8.35	5.89	8.35	5.89			
								SO2	2.56	1.80	2.56	1.80			
								VOC	3.14	2.23	3.14	2.23			
								CO2e	1438	1016	1438	1016			
								Total HAPs	0.03	0.02	0.03	0.02			

3E:	Vertical Capped Stack	2S	Chassis Dyno	N/A	N/A	12.0 hrs/d	4380	PM/PM10/PM2.5	1.32	2.89	1.32	2.89	Gas	Emission Factor	Unknown
								NOx	18.60	40.73	18.60	40.73			
								CO	4.01	8.78	4.01	8.78			
								SO2	1.23	2.69	1.23	2.69			
								VOC	1.51	3.30	1.51	3.30			
								CO2e	690	1511	690	1511			
								Total HAPs	0.02	0.04	0.02	0.04			
								See calculations for speciated HAPs							
4E:	Capped Upward Vertical Stack	3S	Paint Booth	1C	Fabric Filter	C	8760	PM/PM10/PM2.5	5.54	24.25	0.06	0.24	Gas/Solid	Manufacturer Data	Unknown
								VOC	5.21	22.81	5.21	22.81			
								Xylene	1.66	7.25	1.66	7.25			
								Ethylbenzene	0.30	1.30	0.30	1.30			
								Methyl Isobutyl Ketone	1.27	5.58	1.27	5.58			
								Total HAPs	3.23	14.13	3.23	14.13			

5E	General Building Vents/ Openings	4S & 5S	Filter Cleaner & Parts Washers	2C	Fabric Filters	C	8760	PM/PM10/PM2.5 VOC Total HAPs See calculations for speciated VOC's	5.55 0.03 - -	24.31 0.14 - -	0.11 0.03 - -	0.49 0.14 - -	Gas/Solid	Varies	Unknown
6E	General Emergency Generator Exhaust	6S	Emergency Generator or	N/A	N/A	C	500	PM/PM10/PM2.5 NOx CO SO2 VOC CO2e Total HAPs See calculations for speciated HAP's	0.01 2.05 1.88 0.01 0.10 88 0.02	0.001 0.51 0.47 0.003 0.03 22 0.005	0.01 2.05 1.88 0.01 0.10 88 0.02	0.001 0.51 0.47 0.003 0.03 22 0.005	Gas	Emission Factor	Unknown

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

- 1 Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.
- 2 Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).
- 3 List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS<sub>2</sub>, VOCs, H<sub>2</sub>S, Inorganics, Lead, Organics, O<sub>3</sub>, NO, NO<sub>2</sub>, SO<sub>2</sub>, SO<sub>3</sub>, all applicable Greenhouse Gases (including CO<sub>2</sub> and methane), etc. **DO NOT LIST** H<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, O<sub>2</sub>, and Noble Gases.
- 4 Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- 5 Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- 6 Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).
- 7 Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m<sup>3</sup>) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO<sub>2</sub>, use units of ppmv (See 45CSR10).

**Attachment J**  
**EMISSION POINTS DATA SUMMARY SHEET**

Table 2: Release Parameter Data

Emission Point ID No. (Must match Emission Units Table)	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow <sup>1</sup> (acfm) at operating conditions	Velocity (fps)	Ground Level (Height above mean sea level)	Stack Height <sup>2</sup> (Release height of emissions above ground level)	Northing	Easting
1E	0.833	1000	8,669	265	792	22	4250.158	431.188
2E	0.833	1000	8,669	265	792	22	4250.160	431.191
3E	2	1000	17,338 est.	92 est.	792	25 est.	4250.149	431.187
4E	3	Ambient	21,195 est.	50 est.	792	25 est.	4250.144	431.190
5E	N/A	Ambient	N/A	N/A	792	10 ft average	4250.101	431.206
6E	Est. 0.25	1042-1107	281 – 330	Est. 74	792	2 ft average	4250.179	431.216

<sup>1</sup> Give at operating conditions. Include inerts.

<sup>2</sup> Release height of emissions above ground level.

## **ATTACHMENT L**

### **Emissions Unit Data Sheets**

**Attachment L**  
**EMISSIONS UNIT DATA SHEET**  
**GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 6S

<p>1. Name or type and model of proposed affected source:</p> <p><i>NOVEMBER 26, 2007</i> Emergency Generator - 42 kW natural gas (47 kW propane backup) fired emergency generator manufactured in <del>September</del> of 2007. Model Number: GGFE-5938919</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p>    <p>576 standard cubic feet of natural gas per hour (6.9 gal propane per hour as backup).</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p>    <p>No material is produced by this process.</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p>    <p>Natural Gas (propane backup) fuel combustion.</p>

\* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):					
(a) Type and amount in appropriate units of fuel(s) to be burned:					
576 standard cubic feet of natural gas per hour (6.9 gal propane per hour as backup).					
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:					
Natural Gas (propane backup).					
(c) Theoretical combustion air requirement (ACF/unit of fuel):					
@		°F and		psia.	
(d) Percent excess air:					
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:					
42 kW natural gas (47 kW propane) engine					
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:					
N/A					
(g) Proposed maximum design heat input:					
		0.59		× 10 <sup>6</sup> BTU/hr.	
7. Projected operating schedule:					
Hours/Day	As needed	Days/Week	As needed	Weeks/Year	As needed

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:				
@	1042 - 1107	°F and	Unknown	psia
a. NO <sub>x</sub>	2.05	lb/hr	Unknown	grains/ACF
b. SO <sub>2</sub>	0.01	lb/hr	Unknown	grains/ACF
c. CO	1.88	lb/hr	Unknown	grains/ACF
d. PM <sub>10</sub>	0.01	lb/hr	Unknown	grains/ACF
e. Hydrocarbons	0.10	lb/hr	Unknown	grains/ACF
f. VOCs	0.10	lb/hr	Unknown	grains/ACF
g. Pb	0	lb/hr	0	grains/ACF
h. Specify other(s)				
CO <sub>2</sub> e	88	lb/hr	Unknown	grains/ACF
Total HAPs	0.02	lb/hr	Unknown	grains/ACF
Speciated HAPs	See Calculations	lb/hr	Unknown	grains/ACF
		lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

<p>9. Proposed Monitoring, Recordkeeping, Reporting, and Testing</p> <p>Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.</p>	
<p><b>MONITORING</b></p> <p>40 CFR 63 Subpart ZZZZ</p> <ul style="list-style-type: none"> <li>- Install a non-resettable hour meter on the engine.</li> <li>- Operating the engine only for emergency situations or for maintenance and testing.</li> <li>- Limiting operation for maintenance and testing to less than 100 hours per year.</li> </ul>	<p><b>RECORDKEEPING</b></p> <p>40 CFR 63 Subpart ZZZZ</p> <ul style="list-style-type: none"> <li>- Maintaining manufacturer certification that the engine meets the emergency or non-emergency emission standards in Table 1 to 40 CFR 60 Subpart JJJJ.</li> <li>- Maintain a log of operation that indicates when the engine is used for emergency situations, maintenance and testing, and other non-emergency situations.</li> <li>- Maintain records of annual maintenance.</li> </ul>
<p><b>REPORTING</b></p> <p>40 CFR 63 Subpart ZZZZ</p>	<p><b>TESTING</b></p> <p>40 CFR 63 Subpart ZZZZ</p>
<p><b>MONITORING.</b> PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.</p> <p><b>RECORDKEEPING.</b> PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.</p> <p><b>REPORTING.</b> PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.</p> <p><b>TESTING.</b> PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.</p>	
<p>10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty</p> <p>N/A</p>	

**Attachment L**

**Emission Unit Data Sheet General - #2  
Emergency Generator**

There is a natural gas-fired emergency generator with propane backup located onsite rated at 42 kW for natural gas (47 kW for propane). This emission unit only operates during emergencies and for limited testing and maintenance. The only emissions associated with this unit are from fuel combustion that vent outdoors.



# Exhaust Emission Data Sheet

## 47GGFE

### 60 Hz Generator Set

#### Engine Information:

Model: Ford ESG-642  
 Type: 4 Cycle, V 6 Cylinder Spark-Ignited  
 Aspiration: Natural  
 Compression Ratio: 9.3:1  
 Emission Control Device: None

Bore: 3.81 in. (97 mm)  
 Stroke: 3.74 in. (95 mm)  
 Displacement: 256 cu. in. (4.2 liters)

PERFORMANCE DATA	Natural Gas		Propane	
	Standby	Prime	Standby	Prime
Genset Rating (kw) @ 60 Hz	42	36	47	40
BHP @ 1800 RPM (60 Hz)	67	58	74	63
Fuel Consumption (SCFH)	576	507	246	216
Air to Fuel Ratio	17.3:1	17.3:1	15.6:1	15.6:1
Exhaust Gas Flow (CFM)	323	281	330	288
Exhaust Gas Temperature (°F)	1084	1042	1107	1062
EXHAUST EMISSION DATA				
HC (Total Unburned Hydrocarbons)	0.7	0.7	0.7	0.6
NOx (Oxides of Nitrogen as NO2)	12.1	12.4	12.7	13.9
CO (Carbon Monoxide)	7.9	7.6	12.7	10.3
PM10 (Particular Matter)	Negligible	Negligible	Negligible	Negligible

All values are Grams per HP-Hour

#### TEST CONDITIONS

Data was recorded during steady-state rated engine speed ( $\pm 25$  RPM) with full load ( $\pm 2\%$ ). Pressures, temperatures, and emission rates were stabilized.

##### Fuel Specification:

Natural Gas: Dry processed natural gas with 905 BTU per standard cubic foot LHV

Propane: Meets the requirements for Commercial Grade Propane under the ASTM D1835 Standard Specification for Liquefied Gases

Fuel Temperature:  $60 \pm 9$  °F at Flow Transmitter

Fuel Pressure: 14.73 PSIA  $\pm$  0.5 PSIA at Flow Transmitter

Intake Air Temperature:  $77 \pm 9$  °F at inlet

Barometric Pressure: 29.92 in. Hg  $\pm$  1 in. Hg

All emission data is a calculated average of engines tested under the conditions shown above. These data are subjected to instrumentation and engine-to-engine variability. Field emission test data are not guaranteed to these levels. Actual field test results may vary due to test site conditions, installation, fuel specification, test procedures and instrumentation. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

## **ATTACHMENT N**

### **Emissions Calculations**

**Restricted Emissions Summary  
NSR Permit Application  
Cummins Crosspoint, LLC  
Cross Lanes, WV**

Restricted Potential-to-Emit Summary Emissions (TPY)										
PROCESS	UNIT ID	PM	PM10	PM2.5	SOx	NOx	VOC	CO	Lead	CO2e
Engine Dynamometer	1S	3.842	3.842	3.842	3.594	54.660	4.462	11.775		2,033
Chassis Dynamometer	2S	2.891	2.891	2.891	2.694	40.734	3.304	8.778		1,511
Paint Booth	3S	0.243	0.243	0.243			22.813			
Filter Cleaner	4S	0.488	0.488	0.488						
Emergency Generator	6S	0.001	0.001	0.001	0.003	0.513	0.026	0.469		22.05
Cooling Towers	7S	0.769	0.769	0.769						
Total Parts Washers	5S									
Repair Shop Crystal Clean Parts Washer #1	5S						0.140			
Repair Shop Crystal Clean Parts Washer #2	5S						0.032			
Repair Shop Crystal Clean Parts Washer #3	5S						0.032			
MRC Parts Washer #1	5S						0.032			
MRC Parts Washer #2	5S						0.032			
MRC Parts Washer #3	5S						0.032			
MRC Parts Washer #4	5S						0.032			
MRC Parts Washer #5	5S						0.032			
MRC Parts Washer #6	5S						0.032			
<b>TOTAL</b>		<b>8.23</b>	<b>8.23</b>	<b>8.23</b>	<b>6.29</b>	<b>95.91</b>	<b>30.74</b>	<b>21.02</b>		<b>3,566</b>

Note 1: The Engine Dynamometer (1S) is the only unit that is restricted - the remaining are at potential. Hourly rates are not restricted

Potential-to-Emit Summary Emissions (lbs/hr)										
PROCESS	UNIT ID	PM	PM10	PM2.5	SOx	NOx	VOC	CO	Lead	CO2e
Engine Dynamometer	1S	5.500	5.500	5.500	5.125	77.500	6.285	16.700		2,875
Chassis Dynamometer	2S	1.320	1.320	1.320	1.230	18.600	1.508	4.008		690
Paint Booth	3S	0.055	0.055	0.055			5.208			
Filter Cleaner	4S	0.111	0.111	0.111						
Emergency Generator	6S	0.006	0.006	0.006	0.010	2.053	0.103	1.876		88.21
Cooling Towers	7S	0.176	0.176	0.176						
Total Parts Washers	5S									
Repair Shop Crystal Clean Parts Washer #1	5S						0.032			
Repair Shop Crystal Clean Parts Washer #2	5S						0.032			
Repair Shop Crystal Clean Parts Washer #3	5S						0.032			
MRC Parts Washer #1	5S						0.032			
MRC Parts Washer #2	5S						0.032			
MRC Parts Washer #3	5S						0.032			
MRC Parts Washer #4	5S						0.032			
MRC Parts Washer #5	5S						0.032			
MRC Parts Washer #6	5S						0.032			
<b>TOTAL</b>		<b>7.17</b>	<b>7.17</b>	<b>7.17</b>	<b>6.37</b>	<b>98.15</b>	<b>13.14</b>	<b>22.58</b>		<b>3,553</b>

[illegible]

**Emissions Calculations  
NSR Permit Application  
Cummins Crosspoint, LLC  
Cross Lanes, WV**

Flow Diagram Designation

**Engine Dynamometer (RESTRICTED)**

1S

Process Description:

Engine Dynamometer

Control Device:

Emergency Generator - Diesel Combustion

PSD Regulated and HAP Emissions Estimates

**Inputs**

	2,500.0	= Rating of Generator (hp) (power output)
	7000	= Brake Specific Fuel Consumption Conversion of Btu/hp-hr
	17.50	= Fuel Input (MMBtu/hr)
Note 4	6,257	= Potential Operation (hours/year)
Note 5	190,000	= Annual Fuel Usage (gallons/year)
	24,789	= Annual Fuel Input (MMBtu/year)

POLLUTANT	CAS #	Note 1 Emission Factor (lb/hp-hr)	Note 1 Emission Factor (lb/MMBtu)	Maximum Emissions	
				(lbs/hr)	(tpy)
PM/PM10/PM2.5	n/a	0.0022	0.3100 ✓	5.500	3.84
NOx	n/a	0.0310	4.4100 ✓	77.500	54.66
CO	n/a	0.0067	0.9500 ✓	16.700	11.77
Lead	n/a				
SO2	n/a	0.0021	0.2900 ✓	5.125	3.59
VOC	n/a	0.0025	0.3600 ✓	6.285	4.46
CO2e	n/a	1.15	164.00	2875	2033
Benzene	71-43-2		9.33E-04	1.63E-02	1.16E-02
Toluene	108-88-3		4.09E-04	7.16E-03	5.07E-03
Xylenes	1330-20-7		2.85E-04	4.99E-03	3.53E-03
Note 3 Propylene			2.58E-03	4.52E-02	3.20E-02
Note 2 1,3-Butadiene	106-99-0		3.91E-05	6.84E-04	4.85E-04
Formaldehyde	50-00-0		1.18E-03	2.07E-02	1.46E-02
Acetaldehyde	75-07-0		7.67E-04	1.34E-02	9.51E-03
Note 2 Acrolein	107-02-8		9.25E-05	1.62E-03	1.15E-03
<b>Polycyclic aromatic hydrocarbons (PAH)</b>					
Naphthalene	91-20-3		8.48E-05	1.48E-03	1.05E-03
Note 2 POM/Acenaphthylene	203-96-8		5.06E-06	8.86E-05	6.27E-05
Note 2 POM/Acenaphthene	83-32-9		1.42E-06	2.49E-05	1.76E-05
POM/Fluorene	86-73-7		2.92E-05	5.11E-04	3.62E-04
POM/Phenanthrene	85-01-8		2.94E-05	5.15E-04	3.64E-04
POM/Anthracene	120-12-7		1.87E-06	3.27E-05	2.32E-05
POM/Fluoranthene	206-44-0		7.61E-06	1.33E-04	9.43E-05
POM/Pyrene	129-00-0		4.78E-06	8.37E-05	5.92E-05
POM/Benz(a)anthracene	56-55-3		1.68E-06	2.94E-05	2.08E-05
POM/Chrysene	218-01-9		3.53E-07	6.18E-06	4.38E-06
Note 2 POM/Benzo(b)fluoranthene	205-99-2		9.91E-08	1.73E-06	1.23E-06
Note 2 POM/Benzo(k)fluoranthene	207-08-9		1.55E-07	2.71E-06	1.92E-06
Note 2 POM/Benzo(a)pyrene	50-32-8		1.88E-07	3.29E-06	2.33E-06
Note 2 POM/Indeno(1,2,3-cd)pyrene	193-39-5		3.75E-07	6.56E-06	4.65E-06
Note 2 POM/Dibenzo(a,h)anthracene	53-70-3		5.83E-07	1.02E-05	7.23E-06
Note 2 POM/Benzo(g,h,i)perylene	191-24-2		4.89E-07	8.56E-06	6.06E-06
Total PAHs			1.68E-04	2.94E-03	2.08E-03
Total POMs			8.33E-05	1.46E-03	1.03E-03
Total HAPs				6.78E-02	4.80E-02

Note 1: AP-42 (10/95), Section 3.3

Note 2: For conservatism, where emission factors were < than a specific value the specific value was used.

Note 3: Not a Hazardous Air Pollutant

Note 4: Each test has 1 hour of setup time for every 2.5 hours of run time

Note 5: Requested enforceable limit to avoid Title V emission thresholds

Max. Hourly Emission = Max. Hourly Fuel Input x Pollutant E.F.

Max. Yearly Emission = Max. Hourly Emission Rate (lb/hr) x (Max. Hours of Operation)

**Emissions Calculations  
NSR Permit Application  
Cummins Crosspoint, LLC  
Cross Lanes, WV**

Flow Diagram Designation  
**Chassis Dynamometer**  
2S

Process Description:  
**Chassis Dynamometer**  
Control Device:

Emergency Generator - Diesel Combustion  
PSD Regulated and HAP Emissions Estimates

	<u>Inputs</u>	
	600.0	= Rating of Generator (hp) (power output)
	7000	= Brake Specific Fuel Consumption Conversion of Btu/hp-hr
	4.20	= Fuel Input (MMBtu/hr)
Note 4	4,380	= Potential Operation (hours/year)

	POLLUTANT	CAS #	Note 1	Note 1	Maximum Emissions	
			Emission Factor (lb/hp-hr)	Emission Factor (lb/MMBtu)	(lbs/hr)	(tpy)
	PM/PM10/PM2.5	n/a	0.0022		1.320	2.891
	NOx	n/a	0.0310		18.600	40.734
	CO	n/a	0.0067		4.008	8.778
	Lead	n/a				
	SO2	n/a	0.0021		1.230	2.694
	VOC	n/a	0.0025		1.508	3.304
	CO2e	n/a	1.15		690	1511.100
	Benzene	71-43-2		9.33E-04	3.92E-03	8.58E-03
	Toluene	108-88-3		4.09E-04	1.72E-03	3.76E-03
	Xylenes	1330-20-7		2.85E-04	1.20E-03	2.62E-03
Note 3	Propylene			2.58E-03	1.08E-02	2.37E-02
Note 2	1,3-Butadiene	106-99-0		3.91E-05	1.64E-04	3.60E-04
	Formaldehyde	50-00-0		1.18E-03	4.96E-03	1.09E-02
	Acetaldehyde	75-07-0		7.67E-04	3.22E-03	7.05E-03
Note 2	Acrolein	107-02-8		9.25E-05	3.89E-04	8.51E-04
	Polycyclic aromatic hydrocarbons (PAH)					
	Naphthalene	91-20-3		8.48E-05	3.56E-04	7.80E-04
Note 2	POM/Acenaphthylene	203-96-8		5.06E-06	2.13E-05	4.65E-05
Note 2	POM/Acenaphthene	83-32-9		1.42E-06	5.96E-06	1.31E-05
	POM/Fluorene	86-73-7		2.92E-05	1.23E-04	2.69E-04
	POM/Phenanthrene	85-01-8		2.94E-05	1.23E-04	2.70E-04
	POM/Anthracene	120-12-7		1.87E-06	7.85E-06	1.72E-05
	POM/Fluoranthene	206-44-0		7.61E-06	3.20E-05	7.00E-05
	POM/Pyrene	129-00-0		4.78E-06	2.01E-05	4.40E-05
	POM/Benz(a)anthracene	56-55-3		1.68E-06	7.06E-06	1.55E-05
	POM/Chrysene	218-01-9		3.53E-07	1.48E-06	3.25E-06
Note 2	POM/Benzo(b)fluoranthene	205-99-2		9.91E-08	4.16E-07	9.12E-07
Note 2	POM/Benzo(k)fluoranthene	207-08-9		1.55E-07	6.51E-07	1.43E-06
Note 2	POM/Benzo(a)pyrene	50-32-8		1.88E-07	7.90E-07	1.73E-06
Note 2	POM/Indeno(1,2,3-cd)pyrene	193-39-5		3.75E-07	1.58E-06	3.45E-06
Note 2	POM/Dibenzo(a,h)anthracene	53-70-3		5.83E-07	2.45E-06	5.36E-06
Note 2	POM/Benzo(g,h,i)perylene	191-24-2		4.89E-07	2.05E-06	4.50E-06
	Total PAHs			1.68E-04	7.06E-04	1.55E-03
	Total POMs			8.33E-05	3.50E-04	7.66E-04
	Total HAPs				1.63E-02	3.56E-02

Note 1: AP-42 (10/96), Section 3.3

Note 2: For conservatism, where emission factors were < than a specific value the specific value was used

Note 3: Not a Hazardous Air Pollutant

Note 4: Each test has 30 minutes of setup time for every 30 minutes of run time.

Max. Hourly Emission = Max. Hourly Fuel Input x Pollutant E.F.

Max. Yearly Emission = Max.Hourly Emission Rate (lb/hr) x (Max. Hours of Operation)

# Emissions Calculations NSR Permit Application Cummins Crosspoint, LLC Cross Lanes, WV

<b>Actual Maximum Capacity</b> 13,140 Gal/Year	
<b>Flow Diagram Designation</b> Paint Booth 3S	<b>Actual Maximum Capacity</b> 1.50 Gal/Hour
<b>Process Description</b> Cummins Corporation Paint Booth Control Device: SCC Code: Control Device Outlet: <b>Airflow:</b> Stack Gas Temperature:	
Fabric Filter:  grided acfm 70 °F	

Facility Process Name:	Criteria Pollutants									
Paint Booth	PM	PM10	PM2.5	SOx	NOx	VOC	CO	OC	Lead	
<b>Emission Factor Basis:</b> lb/gal										
<b>Emission Factors:</b> (source)	9.23	9.23	9.23			5.47				
Capture Efficiency	100.00	Note 1	Note 1			Note 2				
Control Efficiency	89.00	99.00	100.00			100.00				
Building Capt. Eff										
Transfer Efficiency	60.00	60.00	60.00							
<b>Maximum Stack Emission Rate:</b>										
Hourly (lb/hr)	0.06	0.06	0.06			6.21				
Annual (TPY)	0.24	0.24	0.24			22.81				
<b>Maximum Fugitive Emission Rate:</b>										
Hourly (lb/hr)										
Annual (TPY)										
<b>Maximum Total Emission Rate:</b>										
Hourly (lb/hr)	0.06	0.06	0.06			6.21				
Annual (TPY)	0.24	0.24	0.24			22.81				

Maximum Operating Schedule  
24 hrs/day  
6,760 hrs/year

Note 1: Coating material with the highest solids Content for conservation: Chem-O-Pon Monochrome Epoxy Primer. Assumed 1 VOC content was equal to solids content.  
 Note 2: Coating material with the highest VOC Content for conservation: Jones-Bair Medium Reducer SDS  
 See as applied coating calculation below.  
 Note 3: Coating material with the highest HAPs Content as applied: 3 parts Chem-O-Pon, 1 part Acrythane HS Alternate Catalyst and thinned 15% with Jones-Bair Medium Reducer SDS  
 See as applied coating calculation below.  
 Note 4: Uncontrolled potential PM/PM10/PM2.5 emissions = 5.54 lb/hr and 24.26 tpy

**EXAMPLE CALCULATIONS**  
 PM/PM10 stack emissions(TPY)=(annual throughput)x(PM/PM10 emission factor)x(Capture efficiency) x (1 - Control efficiency) x (1 ton/2000 lbs)  
 PM/PM10 fugitive emissions(TPY)=(annual throughput)x(PM/PM10 emission factor)x(1-capture efficiency/100)x(1-building capture/100)x(1ton/2000 lbs)

HAP Capture Efficiency Metal HAP Control Efficiency										
HAP Emission Calculations		Uncontrolled Emission Factor (lbs/gal)	Controlled Emission Factor (lbs/gal)	Stack Emissions (lb/hr)	Stack Emissions (tons/yr)	Fugitive Emissions (lb/hr)	Fugitive Emissions (tons/yr)	Total Emissions (lb/hr)	Total Emissions (tons/yr)	
Antimony (Sb)	7440-38-0									
Arsenic (As)	7440-35-2									
Beryllium (Be)	7440-41-7									
Cadmium (Cd)	7440-43-9									
Chromium (Cr)	7440-47-3									
Cobalt (Co)	7440-48-4									
Manganese (Mn)	7439-96-5									
Mercury (Hg)	7439-97-6									
Nickel (Ni)	7440-02-0									
Selenium (Se)	7782-49-2									
Formaldehyde	50-00-0									
Cumene	98-82-8									
Benzene	71-43-2									
Toluene	106-86-3									
Xylene	1330-20-7	1.104		Note 3	1.60	7.25		1.66	7.25	
O, P-Xylene	95-47-5, 106-42-3									
M-Xylene	106-38-3									
Phenol	106-95-2									
Naphthalene	91-20-3									
Ethyl Benzene	100-41-4	0.198		Note 3	0.30	1.30		0.30	1.30	
Hydrogen Fluoride	7664-39-3									
Methyl Ethyl Ketone	78-93-3									
Methyl Isobutyl Ketone	106-10-1	0.549		Note 3	1.27	5.58		1.27	5.58	
<b>TOTAL HAPS</b>								3.23	14.13	

Note 3: Coating material with the highest HAPs Content as applied: 3 parts Chem-O-Pon, 1 part Acrythane HS Alternate Catalyst and thinned 15% with Jones-Bair Medium Reducer SDS  
 See as applied coating calculation below.

As Applied Coating Calculation										
Parts	Coating Part	lbs/gal	Xylene (%wt)	Xylene (lbs/gal)	MIK (%wt)	Xylene (lbs/gal)	Ethyl Benzene (%wt)	Ethyl Benzene (lbs/gal)	VOC (%wt)	VOC (lbs/gal)
3	Chem-O Catalyst	12.34	7%		7%		1.5%		25.2%	
1		9	13%				1.5%		25.0%	
0.6	Reducer	7.31	30%		30%		5.0%		100.0%	
<b>Total</b>		4.50								
<b>As Applied Coating</b>		10.958	10.1%	1.104	7.8%	0.849	1.8%	0.198	31.7%	3.472

**Emissions Calculations  
NSR Permit Application  
Cummins Crosspoint, LLC  
Cross Lanes, WV**

Maximum Capacity  
Tons/Year

Flow Diagram Designation  
Filter Cleaner  
4S

Maximum Capacity  
Tons/Hour

Process Description:

Cummins Corporation  
Filter Cleaner  
Control Device:  
SCC Code:  
Control Device Outlet:  
Airflow:  
Stack Gas Temperature:

Filter

0.01 gr/dscf  
1,300 acfm  
70 °F

Note 1  
Note 1

Facility Process Name:		Criteria Pollutants							
Filter Cleaner									
Emission Factor Basis:		PM	PM10	PM2.5	SOx	NOx	VOC	CO	OC
Emission Factors:									
(source)									
Capture Efficiency		100.00	100.00	100.00					
Control Efficiency		98.00	98.00	98.00					
Building Capt. Eff									
Maximum Stack Emission Rate:									
Hourly (lb/hr)		0.111	0.111	0.111					
Annual (TPY)		0.488	0.488	0.488					
Maximum Fugitive Emission Rate:									
Hourly (lb/hr)									
Annual (TPY)									
Total Emission Rate:									
Hourly (lb/hr)		0.111	0.111	0.111					
Annual (TPY)		0.488	0.488	0.488					

Note 1. Based on manufacturer specification information

Note 2. Uncontrolled PM/PM10/PM2.5 emissions would be 5.55 lbs/hr and 24.4 tpy based on an assumed control efficiency of 98%

**POTENTIAL OPERATING SCHEDULE**

24.0 hrs/day  
8,760 hrs/year

**EXAMPLE CALCULATIONS:**

PM/PM10 stack emissions(TPY)=(gr/dscf)x(acfm)x((460+70)/(460+Stack Gas Temp))x(60 min/hr)x(1 lb/7000 gr)x(hrs of operation/yr)x(1 ton/2000 lbs)

PM/PM10 fugitive emissions(TPY)=(annual throughput)x(%Resin)x(PM/PM10 emission factor)x(1-capture efficiency/100)x(1-building capture/100)x(1ton/2000 lbs)

Emissions Calculations  
NSR Permit Application  
Cummins Crosspoint, LLC  
Fairmont, WV

Flow Diagram Description Emergency Generator 6S		Flow Diagram Description Emergency Generator 6S	
Process Description: Emergency Generator Control Device:		Process Description: Emergency Generator Control Device:	
Natural Gas Combustion		Propane Combustion	
Inputs 0.5875 1020 576 500 283.7600 67.00		Inputs 0.59 91.5 246 35.97 0.0069 500 3.45 74.00	
= Max Hourly Heat Input Rate (MMBtu/hr) = MMBtu/MMscf = Max Hourly Fuel Usage Rate (standard cubic feet hour) = Maximum Operation (hours/year) = Maximum Annual Fuel Usage (MMBtu/yr) = BHP		Hourly heat input rate (MMBtu/hr) Fuel heat content (MMBtu/1000 gal) Max Hourly Fuel Usage Rate (standard cubic feet hour) Standard cubic ft per gal compressed propane Hourly fuel usage rate (1000 gal/hr) Maximum Operation (hours/year) Annual fuel usage rate (1000 gal) BHP	
POLLUTANT		POLLUTANT	
CAS #		CAS #	
Emission Factor		Emission Factor	
Maximum Emissions		Maximum Emissions	
(lb/hr)		(lb/hr)	
(TPY)		(TPY)	
PM		PM <sub>10</sub> /PM <sub>2.5</sub>	
PM <sub>10</sub> /PM <sub>2.5</sub>		NO <sub>x</sub>	
NO <sub>x</sub>		CO	
CO		Lead	
Lead		SO <sub>2</sub>	
SO <sub>2</sub>		VOC	
VOC		NH <sub>3</sub>	
NH <sub>3</sub>		CO <sub>2</sub>	
CO <sub>2</sub>		N <sub>2</sub> O	
N <sub>2</sub> O		CH <sub>4</sub>	
CH <sub>4</sub>		CO <sub>2</sub> e	
75-00-5		n/a	
106-99-0		n/a	
542-75-6		n/a	
75-07-0		n/a	
107-02-8		n/a	
71-43-2		n/a	
56-23-5		n/a	
108-90-7		n/a	
67-66-3		n/a	
100-41-4		n/a	
106-93-4		n/a	
107-06-2		n/a	
75-34-3		n/a	
50-00-0		n/a	
67-56-1		n/a	
74-87-3		n/a	
97-20-3		n/a	
n/a		n/a	
76-87-5		n/a	
100-42-5		n/a	
108-88-3		n/a	
75-01-4		n/a	
1330-20-7		n/a	
Total HAPs		Total HAPs	
1.90E-02		1.90E-02	
4.74E-03		4.74E-03	
75-00-5		75-00-5	
106-99-0		106-99-0	
542-75-6		542-75-6	
75-07-0		75-07-0	
107-02-8		107-02-8	
71-43-2		71-43-2	
56-23-5		56-23-5	
108-90-7		108-90-7	
67-66-3		67-66-3	
100-41-4		100-41-4	
106-93-4		106-93-4	
107-06-2		107-06-2	
75-34-3		75-34-3	
50-00-0		50-00-0	
67-56-1		67-56-1	
74-87-3		74-87-3	
97-20-3		97-20-3	
n/a		n/a	
76-87-6		76-87-6	
100-42-5		100-42-5	
108-88-3		108-88-3	
75-01-4		75-01-4	
1330-20-7		1330-20-7	
Total HAPs		Total HAPs	
1.90E-02		1.90E-02	
4.74E-03		4.74E-03	
75-00-5		75-00-5	
106-99-0		106-99-0	
542-75-6		542-75-6	
75-07-0		75-07-0	
107-02-8		107-02-8	
71-43-2		71-43-2	
56-23-5		56-23-5	
108-90-7		108-90-7	
67-66-3		67-66-3	
100-41-4		100-41-4	
106-93-4		106-93-4	
107-06-2		107-06-2	

Flow Diagram Description  
Emergency Generator  
6S

Process Description:  
Emergency Generator  
Control Device:

Natural Gas Combustion

Inputs  
0.5875  
1020  
576  
500  
283.7600  
67.00

= Max Hourly Heat Input Rate (MMBtu/hr)  
= MMBtu/MMscf  
= Max Hourly Fuel Usage Rate (standard cubic feet hour)  
= Maximum Operation (hours/year)  
= Maximum Annual Fuel Usage (MMBtu/yr)  
= BHP

Flow Diagram Description  
Emergency Generator  
6S

Process Description:  
Emergency Generator  
Control Device:

Propane Combustion

Inputs  
0.59  
91.5  
246  
35.97  
0.0069  
500  
3.45  
74.00

Hourly heat input rate (MMBtu/hr)  
Fuel heat content (MMBtu/1000 gal)  
Max Hourly Fuel Usage Rate (standard cubic feet hour)  
Standard cubic ft per gal compressed propane  
Hourly fuel usage rate (1000 gal/hr)  
Maximum Operation (hours/year)  
Annual fuel usage rate (1000 gal)  
BHP

Flow Diagram Description  
Emergency Generator  
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Maximum Operation (hours/year)  
Annual fuel usage rate (1000 gal)  
BHP

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Annual fuel usage rate (1000 gal)  
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Flow Diagram Description  
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Hourly fuel usage rate (1000 gal/hr)  
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Annual fuel usage rate (1000 gal)  
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Standard cubic ft per gal compressed propane  
Hourly fuel usage rate (1000 gal/hr)  
Maximum Operation (hours/year)  
Annual fuel usage rate (1000 gal)  
BHP

Flow Diagram Description  
Emergency Generator  
6S

Process Description:  
Emergency Generator  
Control Device:

Natural Gas Combustion

Inputs  
0.5875  
1020  
576  
500  
283.7600  
67.00

= Max Hourly Heat Input Rate (MMBtu/hr)  
= MMBtu/MMscf  
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Flow Diagram Description  
Emergency Generator  
6S

Process Description:  
Emergency Generator  
Control Device:

Propane Combustion

Inputs  
0.59  
91.5  
246  
35.97  
0.0069  
500  
3.45  
74.00

Hourly heat input rate (MMBtu/hr)  
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Flow Diagram Description  
Emergency Generator  
6S

Process Description:  
Emergency Generator  
Control Device:

Natural Gas Combustion

**Emissions Calculations  
NSR Permit Application  
Cummins Crosspoint, LLC  
Cross Lanes, WV**

Maximum Capacity  
80 942.400 Gallons/Year

Flow Diagram Designation  
Cooling Towers  
7S

Maximum Capacity  
9 240 0 Gallons/Hour

Process Description:  
Cummins Corporation  
Cooling Towers  
Control Device:  
SCC Code:  
Control Device Outlet:  
Airflow:  
Stack Gas Temperature:

gr/dscf  
acfm  
°F

Facility Process Name:		Criteria Pollutants								
Cooling Towers										
Emission Factor Basis:		PM	PM10	PM2.5	SOx	NOx	VOC	CO	OC	Lead
Emission Factors:	lb/1000 gal	0.01900	0.01900	0.01900						
	(source)	Note 1	Note 1	Note 1						
	Capture Efficiency									
	Control Efficiency									
	Building Capt. Eff									
Maximum Stack Emission Rate:										
	Hourly (lb/hr)									
	Annual (TPY)									
Maximum Fugitive Emission Rate:										
	Hourly (lb/hr)	0.176	0.176	0.176						
	Annual (TPY)	0.7690	0.7690	0.7690						
Total Emission Rate:										
	Hourly (lb/hr)	0.176	0.176	0.176						
	Annual (TPY)	0.7690	0.7690	0.7690						

Note 1 AP-42 Ch.13.4-3 Table 13.4-1 Induced draft

Note 2 Assumed PM and PM2.5 equal to PM10

Note 3 Estimated 154 gpm flowrate based on 7 ft/s and 3 in piping

POTENTIAL OPERATING SCHEDULE

24.0 hrs/day  
8,760 hrs/year

EXAMPLE CALCULATIONS:

PM/PM10 stack emissions(TPY)=(annual throughput)x(PM/PM10 emission factor)x(Capture efficiency) x (1 - Control efficiency) x (1 ton/2000 lbs)

PM/PM10 fugitive emissions(TPY)=(annual throughput)x(%Resin)x(PM/PM10 emission factor)x(1-capture efficiency/100)x(1-building capture/100)x(1ton/2000 lbs)

# Emissions Calculations NSR Permit Application Cummins Crosspoint, LLC Cross Lanes, WV

Flow Diagram Designation  
Repair Shop Crystal Clean Parts Washer #1  
5S

Process Description:  
Cummins Corporation  
Repair Shop Crystal Clean Parts Washer #1  
Control Device:  
SCC Code:

Airflow:  
Stack Gas Temperature:

gr/dscf  
acfm  
°F

Description	Average Temp	Wind Speed	Viscosity of air/vapor mixture	Total Pressure	Chemical Formula	Molecular Weight	Conc (weight)	Conc (molar)	Atomic Diffusion Volume	Diffusion Coeff	Vapor Pressure	Partial Pressure	Emission Factor
Nomenclature	T	V	$\mu$	P	--	MW	Cw	Cm	$\nu$	$\text{ft}^2/\text{hr}$	Pv	Pp	EF
Units	K	mph	lb/ft-hr	atm	--	--	%	%	--	--	in Hg	in Hg	lb/hr-ft <sup>2</sup>
Element													
Carbon					C	12.01115			16.5				
Hydrogen					H	1.0079			1.98				
Oxygen					O	15.9994			5.48				
Nitrogen					N	14.0067			5.69				
Sodium					Na	22.9898							
Sulfur					S	32.065			17				
Compound (Component of Liquid)													
1,2,4 - Trimethylbenzene					C <sub>9</sub> H <sub>12</sub>	120.195	2.50%	3.51%	172.26		0.039370	0.001380	1.21E-04
Petroleum Hydrocarbon Naphtha					C <sub>12</sub> H <sub>26</sub>	170.339	97.50%	96.49%	249.48		0.039370	0.037990	1.20E-02
Air								0.0059					
Total													1.22E-02
Phase													
Liquid	294.26			1		188.581			246.772	0.201234	0.039370		0.012416
Air	293.15		0.045		79% N <sub>2</sub> / 21% O <sub>2</sub>	28.850			20.1				

Parts Wash Surface Area:	6	ft <sup>2</sup>
Evaporative Emissions	lb/hr	TPY
1,2,4 - Trimethylbenzene	0.001	0.003
Petroleum Hydrocarbon Naphtha	0.072	0.316
Uncontrolled VOC Emissions	0.07	0.32
% of time parts washer lid is closed	90%	
Controlled VOC Emissions	lb/hr	TPY
	0.007	0.03

Note 1: Crystal Clean 106+ Mineral Spirits  
Note 2: Molecular formulas vary. Given formulas are typical example of each compound

# Emissions Calculations NSR Permit Application Cummins Crosspoint, LLC Cross Lanes, WV

Flow Diagram Designation  
Repair Shop Crystal Clean Parts Washer #2  
5S

Process Description:  
Cummins Corporation  
Repair Shop Crystal Clean Parts Washer #2

Control Device:

SCC Code:

Control Device Outlet:

Airflow:

Stack Gas Temperature:

gr/dscf  
adm  
°F

Description	Average Temp	Wind Speed	Viscosity of air/vapor mixture	Total Pressure	Chemical Formula	Molecular Weight	Conc (weight)	Conc (molar)	Atomic Diffusion Volume	Diffusion Coeff	Vapor Pressure	Partial Pressure	Emission Factor
Nomenclature	T	V	$\mu$	P		MW	Cw	Cm	$V$	$D_v$	Pv	Pp	EF
Units	K	mph	lb/ft-hr	atm		--	%	%	--	ft <sup>2</sup> /hr	in Hg	in Hg	lb/hr-ft <sup>2</sup>
<b>Element</b>													
Carbon					C	12.01115			16.5				
Hydrogen					H	1.0079			1.98				
Oxygen					O	15.9994			5.48				
Nitrogen					N	14.0067			5.69				
Sodium					Na	22.9896							
Sulfur					S	32.065			17				
<b>Compound (Component of Liquid)</b>													
1,2,4 - Trimethylbenzene					C <sub>9</sub> H <sub>12</sub>	120.195	2.50%	3.51%	172.26		0.039370	0.001380	1.21E-04
Petroleum Hydrocarbon Naphtha					C <sub>12</sub> H <sub>26</sub>	170.339	97.50%	96.49%	249.48		0.039370	0.037990	1.20E-02
<b>Total</b>								0.0059					1.22E-02
<b>Phase</b>													
Liquid	294.26			1		188.581			246.772	0.201234	0.039370		0.012416
Air	293.15		0.045		79% N <sub>2</sub> / 21% O <sub>2</sub>	28.850			20.1				
Parts Wash Surface Area:	6	ft <sup>2</sup>											
<b>Evaporative Emissions</b>	lb/hr	TPY											
1,2,4 - Trimethylbenzene	0.001	0.003											
Petroleum Hydrocarbon Naphtha	0.072	0.316											
<b>Uncontrolled VOC Emissions</b>	0.07	0.32											
% of time parts washer lid is closed	90%												
<b>Controlled VOC Emissions</b>	lb/hr	TPY											
	0.007	0.03											

Note 1: Crystal Clean 105+ Mineral Spirits

Note 2: Molecular formulas vary. Given formulas are typical example of each compound.

# Emissions Calculations NSR Permit Application Cummins Crosspoint, LLC Cross Lanes, WV

Flow Diagram Description  
MRC Rotary Parts Washer #1  
AS  
Process Description:  
Cummins Corporation  
MRC Rotary Parts Washer #1  
Control Device:  
SCC Code:  
Control Device Outlet  
Airflow:  
Stack Gas Temperature:

gridded  
adm  
°F

Description	Average Temp	Wind Speed	Vacuum	Total Pressure	Chemical Formula	Molecular Weight	Conc (weight)	Conc (molar)	Atomic Diffusion Volume	Diffusion Coeff	Vapor Pressure	Partial Pressure	Emission Factor
Nomenclature	T	V	in Hg	P		MW	Cw	Cm	v	D <sub>0</sub>	P <sub>v</sub>	P <sub>p</sub>	EF
Units	K	mph	lb/ft <sup>2</sup>	atm			%	%		ft <sup>2</sup> /hr	in Hg	in Hg	lb/hr-ft <sup>3</sup>
Carbon					C	12.01115			16.5				
Hydrogen					H	1.0079			1.48				
Oxygen					O	15.9994			5.48				
Nitrogen					N	14.0067			5.59				
Sulfur					S	32.065			17				
Sodium					Na	22.9898							
Sulfur					S	32.065							
Compound (Component of Liquid)													
Longchain Alcohol Alkoxylated					C <sub>18</sub> H <sub>37</sub> O <sub>2</sub>	121.157	10.00%	12.26%	124.680		0.03970	0.004826	6.17E-04
Ethanolamine					C <sub>2</sub> H <sub>7</sub> NO	60.076	10.00%	24.72%	55.050		0.018889	0.004672	2.24E-04
Dimethyldiethylamine oxide					C <sub>8</sub> H <sub>19</sub> NO	228.407	10.00%	6.47%	303.550		2.44E-09	1.58E-10	6.25E-13
Synthetic Alcohol Ethoxylated					C <sub>20</sub> H <sub>43</sub> O <sub>2</sub>	378.551	10.00%	3.92%	446.040		0.009528	0.000374	1.10E-04
Propylene Glycol					C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	76.095	10.00%	19.62%	76.300		0.004116	0.000569	4.98E-05
Petroleum distillates hydrotreated light					C <sub>10</sub> H <sub>20</sub>	210.404	10.00%	7.05%	305.900		0.203183	0.014342	4.95E-03
Quaternary Coco Alkylamine Ethoxylate					C <sub>18</sub> H <sub>37</sub> O <sub>2</sub>	168.323	10.00%	8.82%	245.520		0.039370	0.003474	6.30E-04
Tripropylene Glycol					C <sub>12</sub> H <sub>26</sub> O <sub>3</sub>	206.283	10.00%	7.20%	239.460		0.008827	0.000090	5.08E-06
(2-methoxyethyl)ethylpropanol					C <sub>10</sub> H <sub>22</sub> O <sub>3</sub>	148.203	10.00%	10.02%	163.620		0.011811	0.001184	1.39E-04
Total								0.0067					6.72E-03
Phase													
Liquid	794.29			1		133.969			157.504	0.251440	0.029631		0.008377
Air	283.15		0.045		798.15, 21% O <sub>2</sub>	28.850			20.1				
Parts Wash Surface Area		3.142	ft <sup>2</sup>										
Evaporative Emissions	lb/hr	TPY											
Longchain Alcohol Alkoxylated	1.84E-03	8.48E-03											
Ethanolamine	1.84E-04	8.08E-03											
Dimethyldiethylamine oxide	1.99E-12	8.08E-03											
Synthetic Alcohol Ethoxylated	3.45E-04	1.51E-03											
Propylene Glycol	1.44E-04	6.30E-04											
Petroleum distillates hydrotreated light	1.58E-02	8.81E-02											
Quaternary Coco Alkylamine Ethoxylate	1.98E-03	8.67E-03											
Tripropylene Glycol	1.60E-05	7.00E-05											
(2-methoxyethyl)ethylpropanol	4.36E-04	1.91E-03											
Uncontrolled VOC Emissions	0.02	0.09											
% of time parts washer lid is closed	90%												
Controlled VOC Emissions	lb/hr	TPY											
	0.002	0.01											

Note 1: MSDS Chem Sheet 60095  
Note 2: Nomenclature follows only. Chemical formulas are typical examples of each compound.

# Emissions Calculations NSR Permit Application Cummins Crosspoint, LLC Cross Lanes, WV

Flow Diagram Description  
KWC Rotary Parts Washer #2

RS

Process Description

Cummins Corporation

MRC Rotary Parts Washer #2

Control Device:

SCC Code:

Control Device Outlet:

Airflow:

Stack Gas Temperature:

grid/cd  
adm  
°F

Description	Average Temp	Wind Speed	Viscosity of air/vapor mixture	Total Pressure	Chemical Formula	Molecular Weight	Conc (weight)	Conc (molar)	Alumic Diffusion Volume	Diffusion Coeff	Vapor Pressure	Partial Pressure	Emission Factor
Nomenclature	T	V	μ	P		MW	Cw	Cm	V	D <sub>a</sub>	P <sub>v</sub>	P <sub>p</sub>	EF
Units	K	mph	lb/ft-hr	atm			%	%	ft <sup>3</sup>	ft <sup>2</sup> /hr	in Hg	in Hg	lb/ft-hr
Element													
Carbon	12.01115				C	12.01115			16.5				
Hydrogen	1.0079				H	1.0079			1.8				
Oxygen	15.9994				O	15.9994			5.48				
Nitrogen	14.0067				N	14.0067			5.69				
Sulfur	32.065				S	32.065							
Sodium	22.9898				Na	22.9898							
Sulfur	32.065				S	32.065			17				
Compound (Component of Liquid)													
Longchain Alcohol Alkoxylated					C <sub>12</sub> H <sub>25</sub> PO <sub>3</sub>	121.157	10.00%	12.28%	124.680		0.039370	0.004826	6.17E-04
Ethanolamine					C <sub>2</sub> H <sub>5</sub> NO	60.076	10.00%	24.72%	58.050		0.018593	0.004672	2.24E-04
Diethyldiethanolamine oxide					C <sub>10</sub> H <sub>21</sub> NO	229.407	10.00%	5.47%	303.550		2.44E-06	1.59E-10	6.25E-13
Synthetic Alcohol Ethoxylated					C <sub>18</sub> H <sub>37</sub> O <sub>5</sub>	378.551	10.00%	3.92%	446.040		0.009528	0.000374	1.10E-04
Propylene Glycol					C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	76.095	10.00%	19.52%	76.300		0.005118	0.000989	4.88E-05
Petroleum distillates, hydrotreated light					C <sub>10</sub> H <sub>18</sub>	142.170	10.00%	7.05%	305.900		0.203183	0.014342	4.95E-03
Guatemalan Coco Alkylamine Ethoxylate					C <sub>18</sub> H <sub>37</sub> O <sub>5</sub>	378.551	10.00%	8.82%	245.520		0.039370	0.003474	6.30E-04
Tripropylene Glycol					C <sub>9</sub> H <sub>18</sub> O <sub>3</sub>	188.253	10.00%	7.20%	210.460		0.008227	0.000665	5.08E-06
(2-methoxymethyl)ethylpropanol					C <sub>7</sub> H <sub>16</sub> O <sub>2</sub>	144.203	10.00%	10.02%	163.620		0.011811	0.001184	1.39E-04
Total								0.0067					6.72E-03
Phase													
Liquid	294.26					133.659			157.504	0.251440	0.029931		0.006977
Air	293.15		0.045	1	99.9% N <sub>2</sub> , 0.1% O <sub>2</sub>	28.950			20.1				
Parts Wash Surface Area		3.142	ft <sup>2</sup>										
Evaporative Emissions		lb/hr	TPY										
Longchain Alcohol Alkoxylated	1.94E-03	8.40E-03											
Ethanolamine	7.04E-04	3.08E-03											
Diethyldiethanolamine oxide	1.59E-12	8.80E-12											
Synthetic Alcohol Ethoxylated	3.45E-04	1.51E-03											
Propylene Glycol	1.44E-04	6.30E-04											
Petroleum distillates, hydrotreated light	1.59E-02	8.81E-02											
Guatemalan Coco Alkylamine Ethoxylate	1.98E-03	8.87E-03											
Tripropylene Glycol	1.60E-05	7.00E-05											
(2-methoxymethyl)ethylpropanol	4.36E-04	1.91E-03											
Uncontrolled VOC Emissions	0.02	0.06											
% of time parts washer lid is closed	90%												
Controlled VOC Emissions	0.002	0.01											

Note 1: MGRS Chemicals are very low volatility compounds.  
Note 2: Molecular formulae are very low volatility compounds.

# Emissions Calculations NSR Permit Application Cummins Crosspoint, LLC Cross Lanes, WV

Flow Diagram Description:  
MRC Parts Washer #1

Process Description:

Cummins Corporation

MRC Parts Washer #1

Control Device:

SCC Code:

Control Device Outlet:

Airflow:

Stack Gas Temperature:

gr/dscd  
acfm  
°F

Description	Average Temp		Wind Speed	Viscosity of air/water lb/ft-hr	Total Pressure		Chemical Formula	Molecular Weight	Conc (weight)		Conc (molar)		Atomic Diffusion Volume	Diffusion Coeff ft <sup>2</sup> /hr	Vapor Pressure Pv in Hg	Partial Pressure Pp in Hg	Emission Factor
	T	K	V	u	P	atm			Cw	%	Cm	%					
Noncombustible																	
Units																	
Element																	
Carbon							C	12.01115					16.5				
Hydrogen							H	1.0079					1.98				
Oxygen							O	15.9994					5.48				
Nitrogen							N	14.0067					5.69				
Sulfur							S	32.065									
Sodium							Na	22.9898									
Sulfur							S	32.065									
Compound (Component of Liquid)																	
Longchain Alcohol Alkoxylated							C <sub>12</sub> H <sub>25</sub> PO <sub>4</sub>	121.157	10.0%	10.0%	12.26%	12.26%	124.880		0.039370	0.004826	6.17E-04
Ethanolamine							C <sub>2</sub> H <sub>7</sub> NO	60.078	10.0%	10.0%	24.72%	24.72%	56.050		0.018859	0.004672	2.24E-04
Dimethyldioctylamine oxide							C <sub>18</sub> H <sub>37</sub> NO	279.407	10.0%	10.0%	6.47%	6.47%	303.550		2.44E-09	1.58E-10	6.25E-13
Synthetic Alcohol Ethoxylated							C <sub>10</sub> H <sub>21</sub> O <sub>4</sub>	372.561	10.0%	10.0%	3.92%	3.92%	446.040		0.009528	0.000374	1.10E-04
Propylene Glycol							C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	76.095	10.0%	10.0%	19.52%	19.52%	76.300		0.005118	0.000999	4.58E-05
Petroleum distillates, hydrotreated light							C <sub>12</sub> H <sub>26</sub>	210.404	10.0%	10.0%	7.05%	7.05%	208.300		0.203183	0.014342	4.95E-03
Quaternary Coco Alkylamine Ethoxylate							C <sub>18</sub> H <sub>37</sub>	168.323	10.0%	10.0%	8.82%	8.82%	245.520		0.038170	0.003474	6.30E-04
Tripropylene Glycol							C <sub>9</sub> H <sub>18</sub> O <sub>4</sub>	206.283	10.0%	10.0%	7.20%	7.20%	230.480		0.000827	0.000060	5.08E-06
(2-methoxyethyl)xy)propanol							C <sub>12</sub> H <sub>25</sub> O <sub>3</sub>	148.203	10.0%	10.0%	10.02%	10.02%	153.620		0.011811	0.001164	1.39E-04
Total																	
Phase																	
Liquid	254.26																
Air	253.15						5% N <sub>2</sub> , 21% O <sub>2</sub>										
				0.045													
Parts Wash Surface Area			6														
Evaporative Emissions																	
Longchain Alcohol Alkoxylated																	
Ethanolamine																	
Dimethyldioctylamine oxide																	
Synthetic Alcohol Ethoxylated																	
Propylene Glycol																	
Petroleum distillates, hydrotreated light																	
Quaternary Coco Alkylamine Ethoxylate																	
Tripropylene Glycol																	
(2-methoxyethyl)xy)propanol																	
Uncontrolled VOC Emissions																	
% of time parts washer lid is closed																	
Controlled VOC Emissions																	

Note 1: MDES Conversion factor

Note 2: MDES Conversion factor

# Emissions Calculations NSR Permit Application Cummins Crosspoint, LLC Cross Lanes, WV

Flow Diagram Description  
MRC Parts Washer #2

SS

Process Description:

Cummins Corporation

MRC Parts Washer #2

Control Device:

SCC Code:

Control Device Outlet:

Airflow:

Stack Gas Temperature:

gr/cscd  
adm  
°F

Description	Average Temp	Wind Speed	Viscosity	Total Pressure	Chemical Formula	Molecular Weight	Conc (weight)	Conc (molar)	Atomic Diffusion Coeff	Diffusion Coeff	Vapor Pressure	Partial Pressure	Emission Factor
Nomenclature	T	V	μ	P		MW	Cw	Cm	D <sub>a</sub>	D <sub>a</sub>	P <sub>v</sub>	P <sub>p</sub>	EF
Units	K	mph	lb-ft-hr	atm		--	%	%	m <sup>2</sup> /hr	m <sup>2</sup> /hr	in Hg	in Hg	lb/hr-ft <sup>3</sup>
Element													
Carbon					C	12.01115			16.5				
Hydrogen					H	1.0079			1.98				
Oxygen					O	15.9994			5.48				
Nitrogen					N	14.0067			5.69				
Sulfur					S	32.065							
Sodium					Na	22.9898							
Sulfur					S	32.065							
Compound (Component of Liquid)													
Longchain Alcohol Alkoxylated					C <sub>12</sub> H <sub>25</sub> PO <sub>3</sub>	121.157	10.00%	12.26%	124.680		0.039370	0.004826	6.17E-04
Ethanolamine					C <sub>2</sub> H <sub>7</sub> NO	60.076	10.00%	24.72%	96.050		0.018899	0.004672	2.24E-04
Dimethyldodecylamine oxide					C <sub>14</sub> H <sub>31</sub> NO	229.407	10.00%	6.47%	305.550		2.44E-08	1.58E-10	6.25E-13
Synthetic Alcohol Ethoxylated					C <sub>18</sub> H <sub>37</sub> O <sub>2</sub>	378.551	10.00%	3.92%	449.040		0.009528	0.000374	1.10E-04
Propylene Glycol					C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	76.095	10.00%	19.52%	76.300		0.005118	0.000599	4.88E-05
Petroleum distillates, hydrotreated light					C <sub>10</sub> H <sub>18</sub>	210.404	10.00%	7.05%	308.900		0.203183	0.014342	4.95E-03
Quaternary Coco Alkylamine Ethoxylate					C <sub>17</sub> H <sub>35</sub>	198.323	10.00%	8.82%	245.520		0.039370	0.003474	6.30E-04
Tripropylene Glycol					C <sub>9</sub> H <sub>19</sub> O <sub>4</sub>	208.283	10.00%	7.20%	230.480		9.00E-07	0.000000	5.08E-08
(2-methoxymethyl)ethylpropylpropanol					C <sub>15</sub> H <sub>33</sub> O <sub>2</sub>	146.203	10.00%	10.02%	153.620		0.011811	0.001164	1.39E-04
Total								0.0097					6.72E-03
Phase													
Liquid	284.26					133.659			157.504	0.251440	0.029931		0.006877
Air	293.15		0.045	1	99% N <sub>2</sub> , 1% O <sub>2</sub>	28.850			20.1				

Parts Wash Surface Area	6	R <sup>2</sup>
Evaporative Emissions	lb/hr	TPY
Longchain Alcohol Alkoxylated	3.70E-03	1.62E-02
Ethanolamine	1.34E-03	5.89E-03
Dimethyldodecylamine oxide	3.75E-12	1.64E-11
Synthetic Alcohol Ethoxylated	6.59E-04	2.89E-03
Propylene Glycol	2.75E-04	1.20E-03
Petroleum distillates, hydrotreated light	2.67E-02	1.30E-01
Quaternary Coco Alkylamine Ethoxylate	3.78E-03	1.66E-02
Tripropylene Glycol	3.05E-05	1.34E-04
(2-methoxymethyl)ethylpropylpropanol	8.33E-04	3.65E-03
Uncontrolled VOC Emissions	0.03	0.15
% of time parts washer lid is closed	90%	
Controlled VOC Emissions	lb/hr	TPY
	0.003	0.02

Notes: 1. MEQUS Carbon Storage 07/20/16  
Notes: 2. MEQUS Air Emissions Only. Given form, values are typical range plus of each compound.

# Emissions Calculations NSR Permit Application Cummins Crosspoint, LLC Cross Lanes, WV

Flow Diagram Description:  
MRC Parts Washer #3

Process Description:  
Cummins Corporation

MRC Parts Washer #3

Control Device:  
SCC Code:

Control Device Outlet:  
Airflow:

Stack Gas Temperature:  
°F

gr/dscf

acfm

°F

Description	Average Temp	Wind Speed	Viscosity of air/vapor mixture	Total Pressure	Chemical Formula	Molecular Weight	Conc (weight)	Conc (molar)	Atomic Diffusion Volume	Diffusion Coeff	Vapor Pressure	Partial Pressure	Emission Factor
Nomenclature	T	V	$\mu$	P		MW	Cw	Cm	$V$	$D_v$	Pv	Pp	EF
Units	K	mph	lb-ft-hr	atm			%	%		ft <sup>2</sup> /hr	in Hg	in Hg	lb/hr-ft <sup>2</sup>
Element													
Carbon					C	12.01115			76.5				
Hydrogen					H	1.0079			1.98				
Oxygen					O	15.9994			5.48				
Nitrogen					N	14.0067			5.69				
Sulfur					S	32.065			17				
Sodium					Na	22.9898							
Sulfur					S	32.065							
Compound (Component of Liquid)													
Longchain Alcohol Alkoxylated					C <sub>12</sub> H <sub>25</sub> PO <sub>3</sub>	121.157	10.00%	12.26%	124.890		0.039370	0.004826	6.17E-04
Ethanolamine					C <sub>2</sub> H <sub>7</sub> NO	60.076	10.00%	24.72%	56.050		0.018860	0.004672	2.24E-04
Dimethyldioctylamine oxide					C <sub>18</sub> H <sub>37</sub> NO	299.407	10.00%	6.47%	303.550		2.44E-09	1.58E-10	6.25E-13
Synthetic Alcohol Ethoxylated					C <sub>20</sub> H <sub>43</sub> O <sub>5</sub>	378.551	10.00%	3.92%	446.040		0.009528	0.000374	1.10E-04
Propylene Glycol					C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	76.096	10.00%	16.52%	76.300		0.005118	0.000988	4.58E-05
Petroleum distillates, hydrotreated light					C <sub>12</sub> H <sub>26</sub>	210.404	10.00%	7.06%	306.900		0.203163	0.014342	4.95E-05
Quaternary Coco Alkylamine Ethoxylate					C <sub>18</sub> H <sub>37</sub>	188.323	10.00%	8.82%	245.520		0.039370	0.003474	6.30E-04
Tripropylene Glycol					C <sub>9</sub> H <sub>18</sub> O <sub>4</sub>	206.283	10.00%	7.20%	230.460		0.000827	0.000050	5.08E-06
(2-methoxymethyl)ethylxylopropanol					C <sub>10</sub> H <sub>20</sub> O <sub>3</sub>	148.203	10.00%	10.02%	163.520		0.011811	0.001164	1.39E-04
Total													
Phase													
Liquid	294.26			1		133.869			157.504	0.251440	0.029931		0.006877
Air	293.15		0.045		79% N <sub>2</sub> , 21% O <sub>2</sub>	28.850			20.1				

Parts Wash Surface Area	6	ft <sup>2</sup>
Evaporative Emissions	lb/hr	TPY
Longchain Alcohol Alkoxylated	3.70E-03	1.62E-02
Ethanolamine	1.34E-03	5.86E-03
Dimethyldioctylamine oxide	3.75E-12	1.64E-11
Synthetic Alcohol Ethoxylated	6.59E-04	2.89E-03
Propylene Glycol	2.75E-04	1.20E-03
Petroleum distillates, hydrotreated light	2.97E-02	1.30E-01
Quaternary Coco Alkylamine Ethoxylate	3.76E-03	1.66E-02
Tripropylene Glycol	3.05E-05	1.34E-04
(2-methoxymethyl)ethylxylopropanol	8.33E-04	3.65E-03
Uncontrolled VOC Emissions	0.03	0.15
% of time parts washer lid is closed	90%	
Controlled VOC Emissions	lb/hr	TPY
	0.003	0.02

Note: 1. MRC Parts Washer #3  
Note: 2. MRC Parts Washer #3

# Emissions Calculations NSR Permit Application Cummins Crosspoint, LLC Cross Lanes, WV

Flow Diagram Description  
MRC Parts Washer #4

SS

Process Description

Cummins Corporation

MRC Parts Washer #4

Control Device:

SCC Code:

Control Device Outlet:

Airflow:

Stack Gas Temperature:

gr/dscf  
acfm  
°F

Description	Average Temp	Wind Speed	Viscosity of air/vapor mixture	Total Pressure	Chemical Formula	Molecular Weight	Conc (weight)	Conc (molar)	Air/mix Diffusion Volume	Diffusion Coeff	Vapor Pressure	Partial Pressure	Emission Factor
Noncondensable	T	V	u	P			Cw	Cm		D <sub>a</sub>	Pv	Pp	EF
Units	K	mph	lb-ft/hr	atm			%	%		ft <sup>2</sup> /hr	in Hg	in Hg	lb/hr-ft <sup>3</sup>
Element													
Carbon					C	12.01115			15.5				
Hydrogen					H	1.0079			1.98				
Oxygen					O	15.9994			5.48				
Nitrogen					N	14.0067			5.69				
Sulfur					S	32.065			17				
Sodium					Na	22.9898							
Sulfur					S	32.065							
Compounds (Component of Liquid)													
Longchain Alcohol Alkoxylated					C <sub>12</sub> H <sub>25</sub> PO <sub>3</sub>	121.157	10.00%	12.26%	124.880		0.039370	0.004826	6.17E-04
Ethanolamine					C <sub>2</sub> H <sub>5</sub> NO	60.076	10.00%	24.73%	58.050		0.018899	0.004672	2.24E-04
Dimethyldecylamine oxide					C <sub>12</sub> H <sub>27</sub> NO	228.407	10.00%	6.47%	303.550		2.44E-09	1.58E-10	6.25E-13
Synthetic Alcohol Ethoxylated					C <sub>20</sub> H <sub>43</sub> O <sub>6</sub>	378.551	10.00%	3.92%	448.040		0.008529	0.000374	1.10E-04
Propylene Glycol					C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	76.095	10.00%	18.52%	76.300		0.005118	0.000599	4.88E-05
Petroleum distillates, hydrotreated light					C <sub>10</sub> H <sub>18</sub>	142.205	10.00%	7.85%	306.900		0.203183	0.014342	4.95E-03
Quaternary Coco Alkylamine Ethoxylate					C <sub>20</sub> H <sub>43</sub>	284.520	10.00%	8.82%	245.520		0.039370	0.003474	6.30E-04
Tripropylene Glycol					C <sub>9</sub> H <sub>18</sub> O <sub>3</sub>	188.263	10.00%	7.20%	230.480		0.000627	0.000060	5.09E-06
(2-methoxyethyl)ethylpropanol					C <sub>10</sub> H <sub>21</sub> O <sub>2</sub>	148.203	10.00%	10.02%	163.820		0.011811	0.001184	1.59E-04
Total								0.067					6.72E-03
Phase													
Liquid	294.26								133.659				
Air	293.15			1	PSA <sub>2</sub> 12150	28.850			20.1		0.251440	0.029951	0.008777
Parts Wash Surface Area													
		6											
Evaporative Emissions													
Longchain Alcohol Alkoxylated													
Ethanolamine													
Dimethyldecylamine oxide													
Synthetic Alcohol Ethoxylated													
Propylene Glycol													
Petroleum distillates, hydrotreated light													
Quaternary Coco Alkylamine Ethoxylate													
Tripropylene Glycol													
(2-methoxyethyl)ethylpropanol													
Uncontrolled VOC Emissions													
	0.03												
% of line parts washer lid is closed													
	90%												
Controlled VOC Emissions													
	0.003												
TPY													
	0.02												

Note: 1. USE-18 Control Station 013259  
Note: 2. Minor input formulas vary. Given. So inputs are typical examples of what can happen.

## John W Peaper

**Subject:** FW: R13-3323 Permit Application Status  
**Attachments:** AttachmentR-AuthorityofCorporation.pdf

**From:** Kessler, Joseph R [mailto:Joseph.R.Kessler@wv.gov]  
**Sent:** Wednesday, June 15, 2016 10:28 AM  
**To:** John W Peaper <john.w.peaper@cummins.com>  
**Cc:** Kessler, Joseph R <Joseph.R.Kessler@wv.gov>  
**Subject:** R13-3323 Permit Application Status



**RE: Application Status: Incomplete**  
**Cummins Crosspoint, LLC**  
**Cross Lanes**  
**Permit Application: R13-3323**  
**Plant ID No.: 039-00671**

*Entire Document*  
**NON-CONFIDENTIAL**

Dear Mr. Peaper:

Your application for an after-the-fact construction permit was received by the Division of Air Quality (DAQ) on May 25, 2016 and assigned to the writer for review. Upon an initial review of the application, it has been determined that the following items need to be addressed prior to the application being deemed complete:

1. The original affidavit of publication from the required Class I Legal Advertisement has not been submitted;  
**Enclosed**
2. Please provide documentation that Mr. John Peaper meets the definition of "Responsible Official" under §45-13-2.22. The attached form may be used to delegate authority to an individual; and - **Enclosed**
3. Please provide the make, model number, year of manufacture, any available vendor emissions data, and EPA Emissions Certificate of Conformity (if available) for the Emergency Generator. - **Enclosed**

Please address the above items as quickly as possible in order to facilitate review of the permit application. Should you have any questions, please contact me at (304) 926-0499 ext. 1219.

Joe Kessler, PE  
Engineer  
West Virginia Division of Air Quality  
601-57th St., SE  
Charleston, WV 25304  
Phone: (304) 926-0499 x1219  
Fax: (304) 926-0478  
[Joseph.r.kessler@wv.gov](mailto:Joseph.r.kessler@wv.gov)

ID. No. 039-00671 Reg. 3323  
Company Cummins Crosspoint  
Facility Cross Lanes  
Initials JR



VIA FedEx

June 21, 2016

Mr. Joe Kessler  
WVDEP – Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

Re: Cummins Crosspoint LLC R13-3323 Application – Affidavit of Publication of Public Notice

Dear Mr. Kessler

Please find enclosed the Affidavit of Publication of the Public Notice from the CHARLESTON GAZETTE MAIL newspaper. The Public Notice was published on May 27, 2016.

If you should have any question please contact me at (317) 240-1965.

Sincerely,

A handwritten signature in blue ink, appearing to read 'John Peaper', with a long horizontal stroke extending to the right.

John Peaper  
HSE Manager

Enclosure

Cummins Crosspoint  
2601 Fortune Circle East, Suite 300 C  
Indianapolis, IN 46241  
Phone: 317-243-7979  
Fax: 317-240-1925  
Crosspoint.cummins.com

**CHARLESTON NEWSPAPERS**

P.O. Box 2993  
 Charleston, West Virginia 25330  
 Billing 348-4898  
 Classified 348-4848  
 1-800-WVA-NEWS

**LEGAL ADVERTISING INVOICE**

INVOICE DATE	05/31/16
ACCOUNT NBR	024205101
SALES REP ID	0053
INVOICE NBR	995813001

CUMMINS CROSSPOINT  
 602 NEW GOLF MOUNTAIN RD.  
 CROSS LANES WV 25313 USA

BILLED  
TO

Please return this portion with your payment.  
 Make checks payable to: Charleston Newspapers

AMOUNT PAID: \_\_\_\_\_

**CHARLESTON NEWSPAPERS**

P.O. Box 2993  
 Charleston, West Virginia 25330  
 Billing 348-4898  
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 1-800-WVA-NEWS  
 FEIN 55-0676079

INVOICE DATE	05/31/16
ACCOUNT NBR	024205101
SALES REP ID	0053
INVOICE NBR	995813001

Legal pricing is based upon 65 words per column inch.

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The Charleston Gazette Mail rate is \$.14 per word.

ISSUE DATE	AD TYPE	PUB	DESCRIPTION		AD NUMBER	AD SIZE		RATE	GROSS AMOUNT	NET AMOUNT
			REFERENCE NBR	PURCHASE ORDER #		TOTAL RUN				
05/27	LEG	GZ	NOTICE IS GIVEN THAT CUMMINS CROSSPOINT, LLC HAS APPLIED TO THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF AIR QUALITY, FOR AN NSR CONSTRUCTION PERMIT FOR AN ENGINE REPAIR AND REBUILD SHOP LOCATED ON 602 NEW GOLF MOUNTAIN RD., CROSS LANES IN KANAWHA COUNTY, WEST VIRGINIA. THE LATITUDE AND LONGITUDE COORDINATES ARE: 38.396635, -81.787901.	995813001	0630512	1X0475		9.10	43.23	
			PREPAID ORDER			4.75			43.23-	
			TOTAL INVOICE AMOUNT							0.00

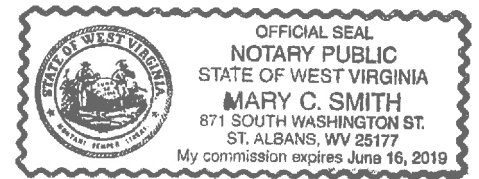
State of West Virginia  
 I, Mary C. Smith  
 CHARLES  
 do sol  
 NOTI  
 was d

The applicant estimates the potential to emit the following Regulated Air Pollutants will be: 8.27 tpy of PM<sub>10</sub>, 2.5 tpy of PM<sub>2.5</sub>, 6.32 tpy of SO<sub>x</sub>, 95.88 tpy of NO<sub>x</sub>, 30.76 tpy of VOC, 20.66 tpy of CO, and 14.4 tpy of Total HAPs.

Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAG at (304) 926-0499, extension 1250, during normal business hours. Dated this 25th day of May, 2016.

By: Cummins Crosspoint, LLC  
 John Peaper,  
 HSE Manager,  
 2601 Fortune Circle East  
 Drive  
 Indianapolis, Indiana  
 46241  
 (630512)



Subscribed and sworn to before me this 1st day of June, 2016 at Magdon  
 05/27/16-05/27/16

Notary Public of Kanawha County, West Virginia

**Attachment R**  
**AUTHORITY OF CORPORATION**  
**OR OTHER BUSINESS ENTITY (DOMESTIC OR FOREIGN)**

TO: The West Virginia Department of Environmental Protection,  
Division of Air Quality

DATE: June 22, 2016

ATTN.: Director

Corporation's / other business entity's Federal Employer I.D. Number 205012258

The undersigned hereby files with the West Virginia Department of Environmental Protection, Division of Air Quality, a permit application and hereby certifies that the said name is a trade name which is used in the conduct of an incorporated business or other business entity.

Further, the corporation or the business entity certifies as follows:

(1) John W. Peaper (is/are) the authorized representative(s) and in that capacity may represent the interest of the corporation or the business entity and may obligate and legally bind the corporation or the business entity.

(2) The corporation or the business entity is authorized to do business in the State of West Virginia.

(3) If the corporation or the business entity changes its authorized representative(s), the corporation or the business entity shall notify the Director of the West Virginia Department of Environmental Protection, Division of Air Quality, immediately upon such change.



\_\_\_\_\_  
President or Other Authorized Officer  
(Vice President, Secretary, Treasurer or other  
official in charge of a principal business function of  
the corporation or the business entity)

(If not the President, then the corporation or the business entity must submit certified minutes or bylaws stating legal authority of other authorized officer to bind the corporation or the business entity).

\_\_\_\_\_  
Secretary

Cummins Crosspoint, LLC

\_\_\_\_\_  
Name of Corporation or business entity

## CUMMINS CROSSPOINT LLC

### MANAGER CONSENT

THE UNDERSIGNED, being the sole Manager of **Cummins Crosspoint LLC** (the “Company”), hereby adopts the following resolutions by written unanimous consent, without convening a meeting of the Managers.

RESOLVED, that the following individuals be and they hereby are elected to the offices set forth opposite their respective names, to hold such offices until they resign, until their successors are elected, or until they are otherwise replaced as permitted in the Operating Agreement of the Company.

<u>Name</u>	<u>Office</u>
Vipul Tandon	President
Kelley Tate	Vice President – Finance & Treasurer
Christine Pfeifler	Secretary
Mike Sandfort	Vice President – Operations
Rob Volkman	Vice President – Power Generation Sales
Kris Urban	Vice President – Engine Business
Kristy Kibler	Vice President – Aftermarket
Merritt Becker	Vice President – OEM Sales
Claudimir Berte	Vice President
Brad Zasa	Vice President

RESOLVED FURTHER, that all actions of the officers and managers heretofore taken or done shall be, and the same hereby are, in all respects ratified, approved and confirmed.

RESOLVED FURTHER, that these resolutions may be executed in multiple counterparts and transmitted via facsimile or electronically, each of which when considered together shall be deemed an original.

RESOLVED FURTHER, that the foregoing resolutions shall be of the same force and effect as if regularly adopted at a meeting of the managers of the Company held upon due notice.

[Signature Page to Follow]

## AUTHORITY OF LIMITED LIABILITY COMPANY (LLC)

TO: The West Virginia Department of Environmental Protection, Division of Air Quality

DATE: May 25, 2016

ATTN: Director

LLC's Federal Employer I.D. Number 205012258

The undersigned hereby files with the West Virginia Department of Environmental Protection, Division of Air Quality, a permit application and hereby certifies that the said name is a trade name which we are using in the conduct of an unincorporated business.

Further, we have agreed or certified as follows:

- (1) The undersigned is a member and in that capacity may represent the interests of the LLC and may obligate and legally bind all current or future members and the LLC.
- (2) The LLC is authorized to do business in the State of West Virginia.
- (3) The name and business address of each member:

Member: Mike Sandfort  
Address: 2601 Fortune Circle East Suite 300C, Indianapolis, IN 46241

Telephone No.: 317-240-1933

Member: Christine Pfeifler  
Address: 2601 Fortune Circle East Suite 300C, Indianapolis, IN 46241

Telephone No.: 317-240-1945

Member: Merritt Becker  
Address: 2601 Fortune Circle East Suite 300C, Indianapolis, IN 46241

Telephone No.: 317-484-2120

- (4) If any other persons become members of the undersigned or our relations as such be altered in any way or if the business should become incorporated, the undersigned will notify you promptly.

  
MEMBER OF LLC (Signature)

Merritt Becker  
MEMBER OF LLC (Typed)

Cummins Crosspoint, LLC

Address: 2601 Fortune Circle East Suite 300C  
Indianapolis, IN 46241  
Telephone No.: 317-243-7979

LIMITED LIABILITY COMPANY'S NAME

## Kessler, Joseph R

---

**From:** Kessler, Joseph R  
**Sent:** Wednesday, June 15, 2016 10:28 AM  
**To:** john.w.peaper@cummins.com  
**Cc:** Kessler, Joseph R  
**Subject:** R13-3323 Permit Application Status  
**Attachments:** AttachmentR-AuthorityofCorporation.pdf

**RE: Application Status: Incomplete**  
**Cummins Crosspoint, LLC**  
**Cross Lanes**  
**Permit Application: R13-3323**  
**Plant ID No.: 039-00671**

*Entire Document*  
**NON-CONFIDENTIAL**

Dear Mr. Peaper:

Your application for an after-the-fact construction permit was received by the Division of Air Quality (DAQ) on May 25, 2016 and assigned to the writer for review. Upon an initial review of the application, it has been determined that the following items need to be addressed prior to the application being deemed complete:

1. The original affidavit of publication from the required Class I Legal Advertisement has not been submitted;
2. Please provide documentation that Mr. John Peaper meets the definition of "Responsible Official" under §45-13-2.22. The attached form may be used to delegate authority to an individual; and
3. Please provide the make, model number, year of manufacture, any available vendor emissions data, and EPA Emissions Certificate of Conformity (if available) for the Emergency Generator.

Please address the above items as quickly as possible in order to facilitate review of the permit application. Should you have any questions, please contact me at (304) 926-0499 ext. 1219.

Joe Kessler, PE  
Engineer  
West Virginia Division of Air Quality  
601-57th St., SE  
Charleston, WV 25304  
Phone: (304) 926-0499 x1219  
Fax: (304) 926-0478  
[Joseph.r.kessler@wv.gov](mailto:Joseph.r.kessler@wv.gov)

## Adkins, Sandra K

---

**From:** Adkins, Sandra K  
**Sent:** Friday, May 27, 2016 11:46 AM  
**To:** 'john.w.peaper@cummins.com'  
**Cc:** McKeone, Beverly D; Kessler, Joseph R  
**Subject:** WV DAQ Permit Application Status for Cummins Crosspoint, LLC; Cross Lanes

**RE: Application Status  
CUMMINS CROSSPOINT, LLC  
Cross Lanes  
Facility ID No. 039-00671  
Application No. R13-3323**

*Entire Document*  
**NON-CONFIDENTIAL**

Mr. Peaper,

Your application for a construction permit for the Cross Lanes Facility was received by this Division on May 25, 2016, and was assigned to Joe Kessler. The following items were not included in the initial application submittal:

**Original affidavit for Class I legal advertisement not submitted.**

**Application fee AND/OR additional application fees:**

*\*\$1,000 Construction, Modification, Relocation or Temporary Permit*

*\*\$2,500 NESHAP*

(Check 331127 in the amount of \$2,500.00 submitted with application. An additional \$1,000.00 is due. If you would like to pay with a Visa or MasterCard, please call Sandra Adkins at 304 926-0499 x1250 for contact information.)

*These items are necessary for the assigned permit writer to continue the 30-day completeness review.*

Within 30 days, you should receive a letter from Joe stating the status of the permit application and, if complete, given an estimated time frame for the agency's final action on the permit.

Any determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit decision.

Should you have any questions, please contact the assigned engineer, Joe Kessler, at 304-926-0499, extension 1219.